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Investing in the next generation matters now more than ever

BY KIM S. NASH

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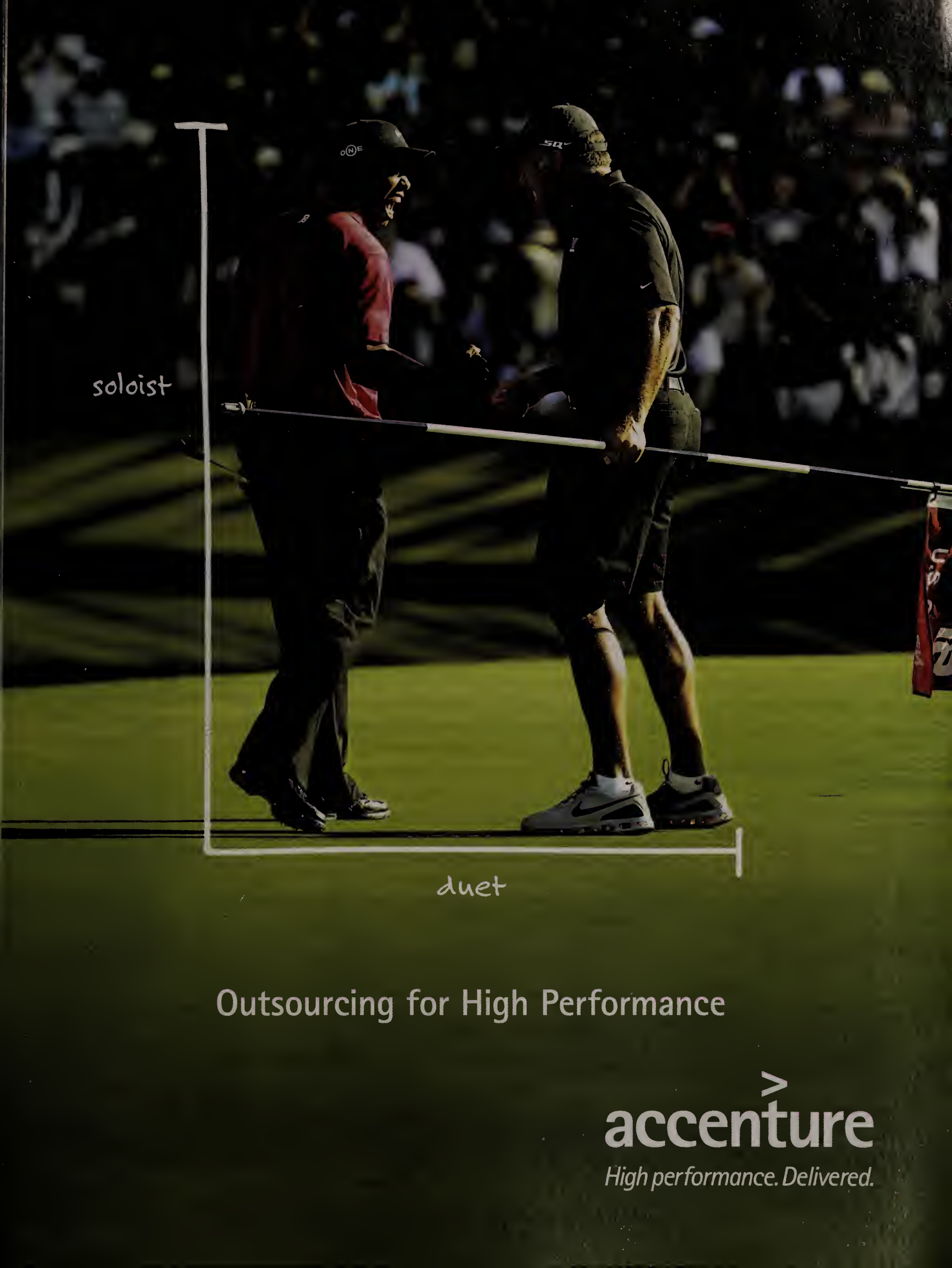
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A photograph of two male golfers on a green. The golfer on the left is wearing a red and black shirt and black pants, with a white 'ONE' logo on his cap. The golfer on the right is wearing a black shirt and black shorts, with a white 'SRV' logo on his cap. They are both holding golf clubs. A white rectangular frame is superimposed over the image, with the word 'soloist' written vertically on the left side and the word 'duet' written horizontally at the bottom. The background is a blurred crowd of spectators.

soloist

duet

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The pressure on internal systems is increasing - litigation is up 43%, the volume of unstructured content is growing at a rate of 61% per year and budgets are frozen. To regain visibility and control of both risk and costs, existing data must be identified, categorized and culled in accordance to the Federal Rules of Civil Procedure (FRCP) guidelines and company governance policies. New information processing strategies must be adopted and innovative technologies implemented to achieve critical, quantifiable savings.

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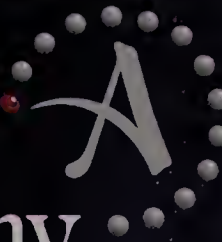
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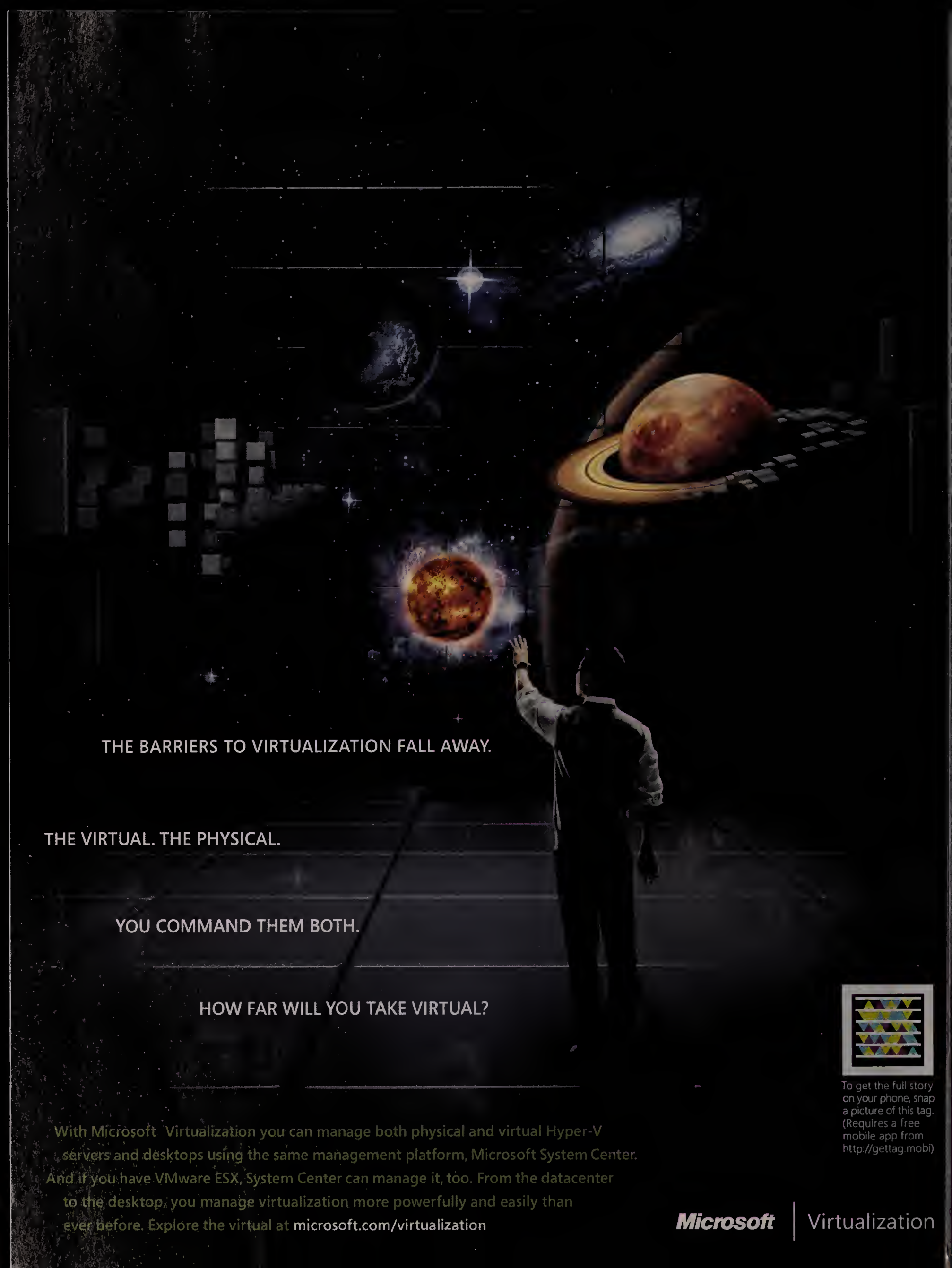
"Autonomy won the enterprise search wars"

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Forging Good Leaders in Bad Times **40**

COVER STORY Leadership development doesn't stop when the going gets tough. If anything, investing in the next generation matters now more than ever.

BY STEPHANIE OVERBY





FROM THE
EDITOR IN CHIEF

Singing in the Lifeboats

I'm not much of a believer in inspirational quotes or feel-good slogans. In fact, I'm inclined to make fun of them unless they're funny to start with. Like the one: "Experience is what you get when you don't get what you want."

If you've never visited Despair.com and cracked up over the Demotivators Calendar ("for the person who has everything but still isn't very happy about it"), I'd recommend it as a refreshingly silly, five-minute mental health break.

During one such break the other day, I came across a quote that crystallized what life in this current recession feels like, though with a welcome twist of optimism. "Life is a shipwreck," wrote Voltaire, the 18th-century French philosopher, "but we must not forget to sing in the lifeboats."

As you read our cover story on "Forging Good Leaders in Bad Times," Page 40, you'll catch a bit of that same lifeboat spirit coming from these future CIOs. This is a story about IT leadership development, based largely on the findings from our annual research and awards program to identify the "Ones to Watch" among your staff.

This year's group of 25 watchable IT executives is a savvy, deeply experienced crowd. The honorees were selected from over 100 nominees, the vast majority of which are Generation Xers. Some of our honorees have already moved on to better opportunities and they all see the double-edged sword presented by the current economy in honing their leadership skills.

"I am using our current business challenges as a learning experience [for my staff], talking about the difficult decisions leaders must make to adjust to a changing environment," says Risa Fogel, an IT executive in the real estate industry who recently moved from Realogy to Cushman & Wakefield.

Yet as talent management falls to the bottom of the list for many companies today, this next generation of leaders is "developing whether you want them to or not," as one management expert warned. And those who "self-select" into leadership roles aren't necessarily qualified to forge ahead without guidance or mentoring.

What our research for this story shows is that a shipwrecked economy is indeed giving the IT leaders of tomorrow some unprecedented opportunities to step up. What today's CIOs must remember to do is keep that chorus going in the lifeboats.

Maryfran Johnson, Editor in Chief, CIO Magazine & Events
mfjohnson@cio.com

start

CHATTER

Gen X Feeling Forgotten

As a generational war continues to wage between the entrenched Boomers and incoming Millennials, Generation X—the once-much-discussed "slackers" who first entered the workforce more than a decade ago—appears caught in the middle.

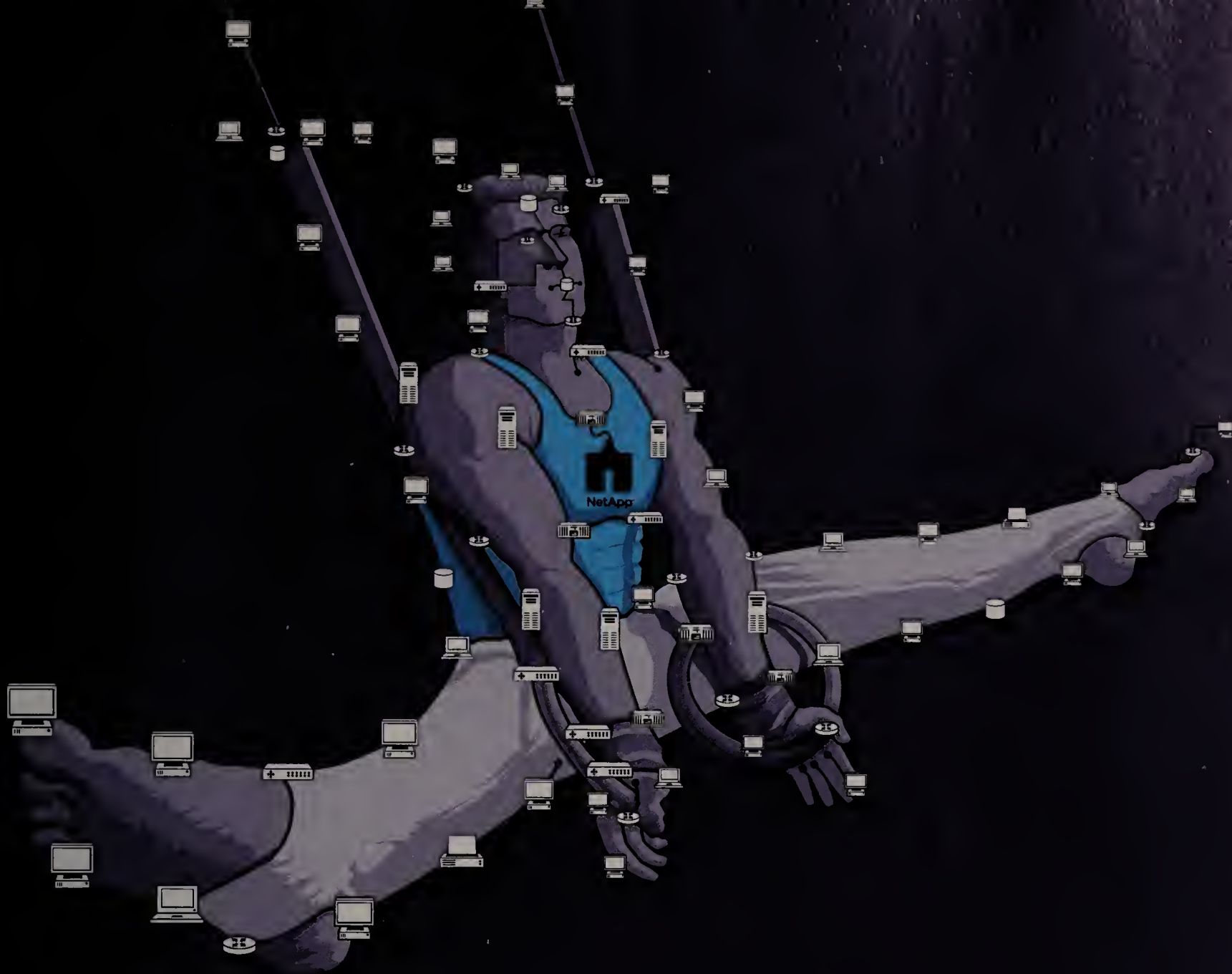
"It's sad [we're] forgotten in this discussion," shared one commenter on the CIO.com story, "Gen X, Gen Y and Baby Boomers Fight for Same IT Jobs." "The truth is, [Gen X] can serve as the bridge between the two generations." Another comment theorized that **the preferential treatment of Gen Y should be blamed on their parents**, namely the Boomers themselves: "It is no secret Boomers are very particular about helping their children succeed." www.cio.com/article/481320

A Love/Hate Relationship

CIO.com Senior Writer Thomas Wailgum's post, "**10 Things I Hate About Tech**" poked fun at the popularity of knocking Microsoft—claiming that those who publicly loathe the company are merely hiding their Windows love. Not so fast, say commenters.

"If you assume everybody loves Microsoft, you've never heard of Linux, BSD, Open Solaris or the other alternative operating systems out there," says one critic. "**I don't hate Microsoft. I just love freedom.**" advice.cio.com/node/7565

Maybe to soften the Wailgum-inspired blows, CIO.com's Senior Writer Shane O'Neill blogged "Microsoft's New 'Not Cool Enough' Ad Cuts Apple Where It's Rotting." O'Neill praises the company's latest ads, writing: "**Is it me or is Microsoft really starting to get its advertising act together?**" of the "Laptop Hunter" campaign. Comments, however, mostly voiced more Apple appreciation: "The cost difference is justified," says one. ▶▶▶



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FROM THE **CEO**

A Brighter Future

While the economy continues to beat down on us like a 10,000-pound hammer, I am still a "glass half full" kind of guy, truly amazed by the technology innovations being announced on a daily basis. What further propels my optimism is this recent finding reported in a Computing Research Association study: The number of computer science majors enrolled in the U.S. increased for the first time in SIX years! Let's hear a round of cheers that total enrollment in computer science classes is up 6.2 percent.

Maybe it's early to say tech is cool again with college students, but here are a few recent press clippings that I saved. Tell me this isn't cool stuff!

- March 19, 2009 (*Computerworld*): The Internet Archive organization plans to announce the opening of a new data center to house two petabytes of information for its Wayback Machine, the digital time capsule that stores archived versions of webpages dating back to 1996. The Wayback Machine archives 85 billion webpages for more than a dozen years, which amounts to about 150 times the content of the Library of Congress. Only five years ago, the Wayback Machine contained about 30 billion webpages. It is expected to continue to grow by 100TB of data per month.

- March 17, 2009 (*Ars Technica*): The City of Chicago is turning to cameras in traffic lights, not just to catch speeders but also to catch the uninsured. Camera provider InsureNet claims to have developed "a simple yet complete answer that delivers totally accurate, instant insurance status verification." *The Chicago Sun-Times* quotes InsureNet president Jonathan Miller on what the city might expect to earn with the system in 2009. "We think at least \$200 million. And the upward projections are far higher."

- March 16, 2009 (CNN): Scientists in the U.S. are developing a laser gun that could kill millions of mosquitoes in minutes. The laser fires at mosquitoes once it detects the audio frequency created by the beating of its wings, burning them on the spot. Developed by some of the astrophysicists involved in what was known as the Star Wars antimissile programs during the Cold War, the project is meant to prevent the spread of malaria.

Whether it's Wayback Machines, insurance-tracking traffic lights or mosquito-whacking lasers, the uplifting thought here is that even in a tough economy, people are still turning to technology and science to better the world and drive business value. That's cool enough for me any day.

Michael Friedenber, President and CEO
mfriedenberg@cio.com

►►► **Chatter** Continued from Page 6

"I'm replacing my Mac because of outgrowing it, not because of failure. To date, I have never truly outgrown a PC." advice.cio.com/node/7567

CIOs on the Move

Martha Heller's Movers and Shakers blog features news on the **new CIOs at Aerojet, Novartis, UnitedHealth and Save the Children** and other announcements including recent departures. advice.cio.com/node/7662

And while we're on the subject of CIO jobs, commenter Robert M. Menar had this to say after reading *CIO* Senior Editor Kim Nash's April 1 story about CIO turnover, "Don't Be a Sitting Duck:"

"If the CIO is not strongly aligned with the CEO, COO and CFO he/she will soon be toast. If IT is treated as a cost center, that is a reflection on the CIO as a poor leader." www.cio.com/article/484008

More on "Doing More"

In her April 1 letter, Editor in Chief Maryfran Johnson discussed the often-used cliché, "doing more with less," and the conversation has continued. Reader C.J. Fearnley says, "I just checked my copy of Buckminster Fuller's 1938 book *Nine Chains to the Moon*, and [the expression] was part of his lexicon back then."

According to Fearnley, Fuller dubbed the practice of industrial evolution "ephemeralization." Fearnley wonders: **"How do we fully employ a population if we can build most of what we need with negligible resources?"** www.cio.com/article/485801

CORRECTION

Our April 1 cover story "The Complexity of Reduction" incorrectly stated Arch Coal's 2008 revenue. It is \$3 billion. The story has been changed online to reflect this correction. www.cio.com/article/484013

Compiled by Christine Celli. Have a comment about a story in this issue of *CIO*? Go to www.cio.com/mogazine/20090501 or write to letters@cio.com.

EDUCATION

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Twitter: No Rush for Business Plan

Despite rampant speculation and angst in the blogosphere about Twitter's lack of revenue, cofounder Biz Stone says there's no rush for the social network to come up with a business plan.

"It's not tough for us because we have a lot of money in the bank and patient investors [and a] patient board," says Stone, adding that the company first wants to focus on growing the network, increasing its user base and adding new features to the site. *Computerworld*

H-1B Demand Declines

Demand for H-1B visas (temporary visas for foreign workers with special expertise) usually fluctuates with the economy, and this year is no exception. In fact, the initial number of H-1B applications filed with the federal government was down even more sharply than expected from the number filed a year ago. *Computerworld*

Microsoft Takes on Google Docs

The next version of Microsoft Office, code-named Office 14, will include lightweight but fully functional versions of Word, Excel, PowerPoint and OneNote that can run in a browser.

Called Office Web Applications, the service will be in beta later this year, according to Microsoft, but the final versions of the Office Web apps won't come until the desktop version of Office 14 is also done.

Steve Ballmer announced in February that this won't happen until 2010. Office Web Applications follow through on Microsoft's promise to deliver "software plus services," as the company often claims. According to analysts, the new products are a belated move to get productivity tools online and curb the threat of free, Web-based apps from Google, Zoho and OpenOffice.org. *CIO.com*

"Cap and Trade" Plan Could Hit Data Centers

Data centers are part of the greenhouse gas problem, and their operators may soon start paying to help fix it under President Obama's proposed cap-and-trade energy plan.

The cap-and-trade scheme is designed to impose higher costs on power generators that don't use so-called clean energy sources. Data centers clearly are among the facilities that would be in the bull's-eye. Costs are expected to vary by region: likely higher in Chicago, which relies heavily on coal, for example, than in New York, where nuclear power is more prevalent. *Computerworld*

Netbooks Are Sparking Corporate Interest

Typically wireless, lightweight and lightly powered, netbooks are all the rage with consumers and are making headway with businesses.

Kurt Madden, CTO for Fresno Unified School District, recently watched a classroom of fifth graders work with HP Mini-Note 2133, noting much of the processing, data, storage and applications are online, requiring fewer native apps. That means users need much less than a full-blown notebook PC to do their work, a model that fits with corporate computing trends, according to analysts. *Network World*

Skype Moves In on Cellphone Industry

By installing new software on their smartphones, consumers can gain access to alternative phone services and bypass their cell carriers.

The trend isn't new, but it may have reached a tipping point on March 31. That's when the Internet-based telephone service Skype introduced a version of its software that runs on the Apple iPhone. With the new software installed, users can use Wi-Fi to relay calls over the internet with "surprisingly clear" call quality, saving precious service-provided minutes and money. *The Boston Globe*

Red Hat: New Ties With App Vendors

Red Hat has announced an alliance to help form relationships between its distributor, Synnex, and companies that sell open-source software that run on both Linux and JBoss Enterprise Middleware. Such vendors include Alfresco, EnterpriseDB, Ingres, Jaspersoft, Likewise, Pentaho, Zmanda, Zenoss and Zimbra.

The alliance gives the small, open-source vendors an opportunity to reach a broad market that they otherwise would not have access to, says Roger Egan, Red Hat's vice president of channel sales for North America. *IDG News Service*



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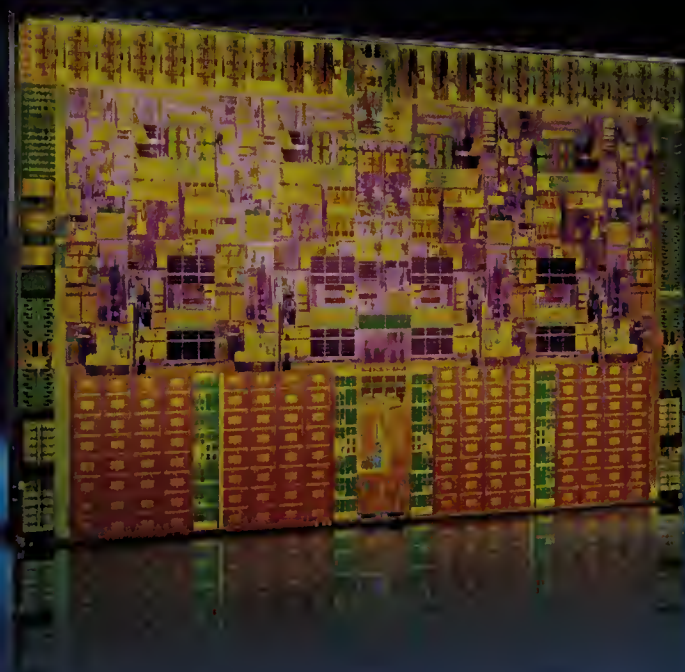
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*Performance comparison using SPECjbb2005 business operations per second. Eight-month estimated payback is an Intel estimate as of November 2008 comparing the cost savings achieved in 9:1 server consolidation from power/cooling and OS licensing versus the cost of purchasing a new server featuring Intel® Xeon® processor 5500 series. All results are provided for informational purposes only. Any difference in system hardware, software design or configuration may affect actual performance and/or cost savings. For detailed calculations, configurations and assumptions, see www.intel.com/performance ©2009 Intel Corporation. Intel, the Intel logo and Xeon are trademarks of Intel Corporation in the United States and other countries.

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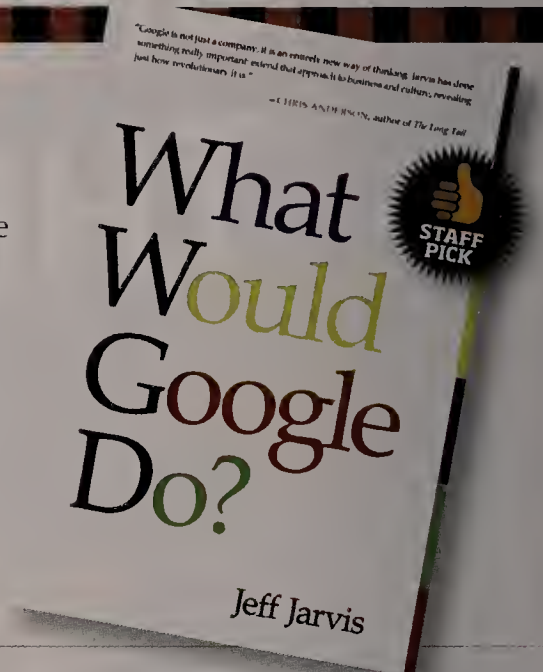
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What Would Google Do?

By Jeff Jarvis

THE FOUNDER OF media blog BuzzMachine.com takes a look at one of the world's most influential Internet companies. It should have lessons to teach, right? Through its reign as search-engine king, Google defines how everyone crafts their Web presence, writes Jarvis, who is also associate professor and director of the interactive journalism program at the City University of New York's Graduate School of Journalism. But just as important, as companies explore today's social networking tools and whatever comes next, GOOGLE HAS NOT just established the rules for the medium, it's raised the bar for information as a business. *HarperCollins, 2009, \$26.99*



In Pursuit of Elegance

Why the Best Ideas Have Something Missing

By Matthew E. May

BOOK If this former advisor to Toyota is right, the iPhone succeeded not because of complex strategies but rather a simple one—subtraction. May applies concepts drawn from art, math and neuroscience to explain why subtracting elements of your business operations can lead to better performance, and why we often overlook simple solutions. *Broadway Business, 2009, \$23.95*

Ask the Coach

By Marshall Goldsmith

BLOG Moving on to a new job? This widely regarded executive coach and best-selling author says in a recent post that while each career move is unique, there are still some dos and don'ts when it comes to informing your successor and your team. First, he says, talk to your team members individually *before* your successor does. Once the news is out, keep second thoughts to yourself. blogs.harvardbusiness.org/goldsmith

Dot Cloud

The 21st Century Business Platform
Built on Cloud Computing

By Peter Fingar

BOOK As the recession continues, CEOs search desperately for signs that the bottom is near and for the ladder they'll use to climb back up. Will that ladder be cloud

computing? "To say that we are living in interesting times is an understatement," says Jim Sinur, vice president of research at Gartner. "And [Fingar] has captured the essence of how business will work going forward." *Meghan-Kiffer Press, 2009, \$34.95*

Real Time Economics

The Wall Street Journal

BLOG This blog by the editorial staff of the *Wall Street Journal* is a great source for debate on the recession. For the post "How \$8 a Week Can Best Boost the Economy," 16 economists (including Harvard's Martin Feldstein) were asked to suggest their best application for the \$8 you'll get back in your paycheck thanks to the stimulus plan. blogs.wsj.com/economics

Life as a Healthcare CIO

By John D. Halamka

BLOG In this engaging blog, Halamka, CIO of CareGroup Health System and Harvard Medical School, covers a wide variety of topics—from running IT for a hospital network and national health policy to cutting his budget. Recent posts cover his trip to Japan (where he met with the CIO for the city of Hiroshima) and the stimulus bill (he's also chairman of the U.S. Healthcare Information Technology Standards Panel). geekdoctor.blogspot.com

Compiled by Christine Celli. Tell us what you're reading: Go to advice.cio.com/blogs/the_techie_reading_list.



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Designed for Community

HGTV.com renovated its website to attract more visitors

BY JARINA D'AURIA

Nonretail websites can deliver more than just pictures and text. When used to create customer communities, they can drive revenue. Yet many corporate sites haven't organized their content to encourage customers to explore it, share their opinions or converse with each other about the products and services they use.

Scripps Networks redesigned its HGTV.com site to incorporate community features. Key to the effort: a more effective content management system that ensures visitors can find specific pages they're looking for and related information, says Jen Goforth, Scripps's SVP of operations. The company has also added 2,000 pages to HGTV.com since December, providing more space for advertisers (the site's primary revenue source) and a wider range of topics around which to place their ads.

Media companies are leading the development of online communities, says Oliver Young, a Forrester analyst. However, Young says, most business websites aren't equipped to handle the extra content posted by visitors that a community-focused website would bring. Most companies, ►►►

►►► **Community** Continued from Page 17

he says, will have to rethink their content-related processes to prepare for the influx of information.

Scripps moved ahead with its online community efforts after its digital team researched site metrics and found that the areas on HGTV.com where users interacted with the content and each other had the highest traffic.

For example, HGTV.com's "Rate My Space" site, where visitors can post and comment on each other's interior designs, was so popular that Scripps created a TV show based on it.

As part of the redesign, HGTV.com set up new sections, such "Share My Craft," where users comment on each others' designs and can talk about whatever piques their interest. Before the upgrade, HGTV.com gave users decorating tips and other advice based on its cable shows, but visitors couldn't share their opinions.

To make the site more interactive, Sarah Cottay, VP of software engineering, and her team had to make changes on the back end. One area that got a makeover was the site search. In the past, finding a specific topic on HGTV.com meant digging through many articles. The data wasn't classified in a taxonomy so that, for example, information on living rooms was in a living room section. Cottay's team had to tag each page with keywords in order to serve up relevant content next to articles that readers find themselves. They also added a sitewide comment capability.

Now users can find the exact green living room that they saw on TV and also be able to see other green living rooms on the same page of the site. Topic-oriented pages are also important for advertisers, who are looking for the best spot for their ads, says Goforth.

Focusing on how visitors use your content is important, advises Cottay. "Make sure your classification is specific enough that it can drive what you want, but flexible enough that it could grow as you understand more about your content," she says.

In February, two months after the relaunch of HGTV.com, Cottay says visitor metrics are showing that users are spending more time on the site. "Rate My Space" page views are up 75 percent since February 2008, making it one of the most active areas of the site.

Contact Associate Staff Writer Jarina D'Auria at jdauria@cia.com.

The Next New Thing

Countries where businesses absorb new tech quickly

The most aggressive adopters of new technologies

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2. Japan
3. United States
4. Sweden
5. Switzerland
6. Denmark
7. Austria
8. Finland
9. Norway
10. Taiwan

SOURCE: World Economic Forum/Insead

Greener Profits

Companies in Europe that are serious about going green earned a 2 percent higher profit margin compared to others in the same industry, according to a survey done in Europe by IDC and IT services company Atos Origin.

"If companies truly go down the path of using sustainability as a differentiator, what you tend to find is that they invest in things like telecommuting, telepresence and video conferencing. So, for example, their employee cost tends to be lower," says Vernon Turner, senior vice president, enterprise infrastructure at IDC (a sister company to CIO's publisher).

The research is based on a survey of 165 senior executives in the manufacturing and retail sectors, according to Atos.

The driving factor for green investment is still lowering energy costs, according to Turner. Low carbon impact and sustainable or renewable products are nowhere near as important in the mind of IT executives.

Green IT won't get much traction as a stand-alone initiative in a corporation, according to Turner, because business needs and operational requirements still take precedence over environmental concerns.

-Mikael Ricknäs

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TRBA



Rami Levy, distinguished member, Motorola technical staff

MOTOROLA

Prediction Markets

BY KRISTIN BURNHAM

THE PROJECT :: Deploy a prediction market to aggregate new business ideas suggested by Motorola employees and assess their viability. A prediction market is a system for forecasting the outcome of projects or events based on how willing individuals are to buy "stock" in them. Users buy shares to vote items up. Each item is evaluated based on how much it is "worth." The higher the value, the more popular the idea.

THE BUSINESS CASE :: Motorola sought to allow any employee the opportunity to propose ideas for new products, upgrades to current products, productivity improvements or cycle-time reductions, says Rami Levy, distinguished member of Motorola's technical staff and a member of its open-source technology team, which manages the prediction markets for the company. In 2003, Motorola had built a system to collect ideas, called ThinkTank. But when thousands of suggestions poured in, the teams that were supposed to weed through them were overwhelmed.

Using prediction market technology, Motorola could engage employees in the selection process by letting them vote for the ideas they thought had the best business potential. The most popular ideas could then be selected for further study and eventually be developed.

FIRST STEPS :: Levy and his team worked with a variety of director-level managers, including senior VPs, to secure buy-in for the project. "ThinkTank was already being sponsored by an SVP," he says, but they needed support from others who would have to produce the business-case and user scenarios for new product ideas. That sponsorship was crucial to obtaining cross-organizational participation and funding for the tool.

Once Levy's team secured management support, they integrated prediction software from Consensus

Point (called ThinkTank Idea eXchange, or TIX, internally), with its existing ThinkTank application. In a six-month pilot during 2007, they experimented with market parameters, such as how long to keep ideas in play and how to finance participants' purchases.

Today, employees submit ideas to ThinkTank, where anyone within Motorola can vote on them. Ideas that receive at least five votes are eligible for TIX, where each idea is initially valued at \$10 per share. Anyone who wants to participate gets \$100,000 to start with to buy the stock of the ideas they like best. As employees buy or sell shares, the value of the idea rises—or not. After 30 days, an idea review team determines which of the top-valued ideas to pursue. Winners are judged based on their stock performance, and participants who hold stock in winning ideas get a bonus.

It typically takes 18 months to develop a product at Motorola, so the first product ideas vetted through TIX are expected to come to market this year, Levy says.

WHAT TO WATCH OUT FOR :: Market parameters that work in one circumstance won't necessarily work in another, says Levy. You have to fine-tune your system to your environment. Motorola decided to limit an idea to a month in TIX to ensure new ideas were always entering the market. Meanwhile, even though employees find participating fun, you need to get them involved and keep them engaged. Levy's team ran ads on the company's intranet, conducted user satisfaction surveys and incorporated social media into the system. "Socialize the experience," he recommends, "by integrating user comments, tagging, recommendations and links to other information."

Copy Editor Kristin Burnham can be reached at kburnham@cio.com. Follow her at twitter.com/kmburnham.

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THE **TOP LINE** INTERVIEW :: **David Neeleman**

Start IT Up Again

The founder and former CEO of JetBlue launched Azul, a Brazilian airline, last year



What can you do now that you couldn't do at JetBlue?

From a reliability and a capital point of view, we decided to do a lot more outsourcing here than I was comfortable with at JetBlue—the data center, phone system and pretty well everything. Even parts of our reservations center.

We do some software development internally, but most development is outsourced. Instead of

having hundreds of people on the IT staff, we have probably 15, and those 15 are really, really smart.

How does that make possible the airline you want to build?

We can move a lot quicker. For every bit of IT functionality proposed, you have to ask yourself, 'What's it going to cost me? What's it going to save me? Do my customers like me better because of it?' Even if you

pay more, it's better to do things faster than let things languish for years.

What languished?

When I left [the CEO position at] JetBlue [in 2007], we still couldn't send text messages to people when flights were late. The ability to have frequent-flyer customers see their balance and use that to make a reservation online—we didn't have that at JetBlue for a long time and here we do.

This communication with customers is critical.

How involved will your IT group be in talking with customers?

Totally. Our president [Pedro Janot] flies every week. He has a little book to take notes in. He's talked to over 1,000 customers in the last four weeks. When the president asks you, 'Did you talk to customers' and you haven't, you don't feel so well. —Kim S. Nash

NEW MARKETS

Patients Looking After Themselves

Remote devices monitor health and reduce hospital visits



HOW IT WORKS: Various technologies enable patients to exchange health information with caregivers. Patients use the Intel Health Guide system to video conference with healthcare professionals and receive videos about diet and exercise. Patients can also attach a blood pressure cuff or other devices using a Bluetooth wireless link and relay vital signs to a nurse. T+ Medical offers more targeted products, such as a diabetes management program that runs on a cell phone and helps patients track and report blood glucose levels.

WHO IS DOING IT: Several healthcare providers are testing or using these devices. Meridian Health is testing the T+ device within its four New Jersey hospitals. It will also evaluate the Intel Health Guide to see how it compares with the Honeywell HomMed, a similar device that it has been using for two years. A device like HomMed can reduce the number of times a cardiac patient has to be readmitted, from three times a year to once a year, says Sandra Elliott, Meridian's director of consumer technology and service development.

GROWTH POTENTIAL: Hard to be sure, as some devices are still undergoing market and clinical trials. Much may also depend on insurance providers which, Elliott notes, are starting to provide reimbursements (most patients using home care devices today are on Medicare, so hospitals are reimbursed by the government). —James Niccolai



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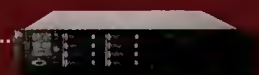


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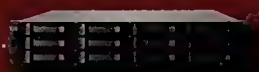


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Making a Game of Risk

Virtual rail yard lets Union Pacific engineers learn safely from their mistakes **BY JARINA D'AURIA**

The locomotive rattled down the track, straight toward the Union Pacific train operator and his string of freight cars. The driver quickly maneuvered to a different track: The trains were close to colliding. Luckily, this near-miss was just the outcome of a computer training game to teach Union Pacific (UP) railroad workers how to handle dangerous, real-world situations.

Safety is a major concern for UP, which runs North America's longest railroad. So the game lets it do something traditional training does not—put trainees in unexpected and possibly hazardous circumstances so they learn to handle them without the risk. "We wouldn't want to damage a driver or a railcar," says UP CIO Lynden Tennison.

While the recession has slowed adoption of corporate training games, says Forrester Research analyst Claire Schooley, "it's still going to be big." The U.S. Army, an early adopter, will invest \$50 million over five years in a gaming unit to train soldiers for combat situations. ▶▶▶



UP uses simulators for training locomotive engineers but also knew it needed a more efficient way to train other yard employees. Traditional methods were too time consuming. IT led the effort as it understood the technology available, says Tennison. In 2005, work began on a game that also instructs switchmen, brakemen and other yard personnel.

Tennison hired gaming experts from PI Engineering to help build a simulated rail yard because UP's IT team didn't have experience with gaming tools. While IT departments sometimes build gaming platforms, most contract with gaming specialists to do the job, says Schooley.

PI Engineering provided development tools—such as a power engine, which allows for realistic graphics—along with physics experts who calculated how trains start and stop based on weather, friction, incline and other real-life effects. They worked with UP's software group to build the simulation and rail yard scenarios, which include hours of video footage and thousands of photo stills of its rail yard in Cheyenne, Wyo., as well as customer facilities, loading docks, rail lines, highways and geographical landmarks. While the combination of footage and physics puts workers in real-life work situations, such as switching cars in the yard, "the real value is not the pictures or video," says Tennison. "It's how you use the physics and the logic behind how your employees do their job." More than 2,000 UP employees have trained with the game.

Although it's still early to have comprehensive metrics, Tennison says safety performance in locations using the game has improved compared to locations that train without it. The game also lets UP's yard personnel augment other training, such as the 40 hours mandated yearly by the Federal Railroad Administration. "The biggest benefit for us is that we can accelerate training, especially with new employees or recurring training," he says. And by taking advantage of gaming culture, the simulation is "more natural and familiar for younger employees because most grew up with video games and relate easily to the medium."

Tennison says to start small when implementing training games. He did a pilot and validated it by proving the business value through time and safety benefits. He is now evaluating simulation games for UP field managers to help prepare them for complex decision-making situations.

Contact Associate Staff Writer Jarina D'Auria at jdauria@cio.com.



Getting More from Desktop Management

BY RICK SWANBORG

In organizations in diversified companies—particularly those grown through acquisition—wage a seemingly endless battle against unnecessary IT diversity and related costs. Conceived, planned and executed in 18 months, UnitedHealth Group's (UHG) Hercules program proves the complexity can be conquered, while protecting or improving IT's service levels. By creating a standard desktop configuration and consistent management processes, Hercules reduced total cost of ownership to \$76 per month per desktop, from over \$240.

The Situation: UHG has grown tremendously through acquisitions. A barometer of the related IT challenges faced: The number of desktops grew from 24,000 to 90,000 in four years, leading to an unsustainable and unsatisfactory level of IT cost, complexity and service.

What They Did: In 2004, with the CEO's support, Alistair Jacques, then SVP of UHG-IT, launched Hercules, focusing it on standardizing and streamlining the processes behind desktop management: procurement, configuration, installation, life cycle and asset management. In addition to this focus on process, two techniques stand out as key to the program's success. Working with finance, IT developed a chargeback model that imposes a premium on nonstandardized desktop configurations: \$170 per month versus \$45 per month for a standard configuration. This value price encourages business managers to choose the more efficient infrastructure. UHG also reduced costly on-site support by reorganizing it: A central IT team manages high-level support activities, completing 95 percent remotely, while select, on-site end users (often non-IT administrative staff trained by IT) provide basic support to colleagues.

Why It Was Unique: UHG-IT treated desktop management as a business process challenge rather than a technology issue. This approach freed them to employ tactics like non-IT staff for desktop support and value pricing.

The Takeaway: To date, UHG has converted 75,000 out of 90,000 devices to the new standards, delivering \$42 million in annual savings. Effectively, UHG can now manage nearly four times the number of end users with the same number of IT personnel as in 2004. All while actually improving—not diminishing—service levels: IT now deploys 99.4 percent of releases, updates and patches in three hours, instead of 65 percent in three weeks.

Rick Swanborg is president of ICEx and a professor at Boston University. A full case study can be found at www.icex.com.

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LEGAL AFFAIRS

The Beginning of the End

Why you should plan for the termination of an outsourcing deal before you ink the contract **BY KARL A. HOCHKAMMER**

For whatever reason, you are terminating a contract with a key outsourcing vendor. Perhaps their prices are too high, or they failed to meet performance goals. You look over your contract and—surprise! Very little is said about what happens when the deal ends and you need to transition to a new vendor.

Contracts often do not address this critical issue in sufficient detail, making a difficult situation even worse. Instead of focusing on the new vendor, CIOs find themselves negotiating with both vendors to avoid a service interruption or other adverse effect on business.

The time to set the groundwork for a termination transition plan is when you negotiate the original contract. No one likes to do this—focusing on a relationship's end before it starts is viewed as bad karma. But unless you do so, the vendor has no incentive to do more than the contract requires when it comes to transitioning out of a deal.

How can you mitigate this risk? Start by making sure your contract addresses the minimum requirements for a termination transition plan. The plan should provide a

detailed rule book for doing this in an organized way.

To begin, the vendor should be contractually obligated to aid in the development of a transition plan. The vendor and customer should review and approve the plan as part of the initial contract or right after it begins. Basic requirements should be specified, such as requiring details of activities performed by the vendor, the customer and affected third parties, as well as a process allowing activities to be validated and updated during a transition.

Key issues include: ownership and return of data, documentation and intellectual property created or used to develop the services and knowledge transfer; determining whether a new vendor may obtain hardware, software, staff and business procedures used by the incumbent; and detailing the incumbent vendor's obligation to perform the steady-state services during transition.

All relationships have a beginning and an end. A well-designed contract ensures a successful exit for everyone.

Karl A. Hochkammer is an attorney with Honigman, Miller Schwartz & Cohn.

How CIOs Control Costs

BUDGETS Call it the CIO's dilemma: As IT leaders cut budgets in response to rising economic pressures, some find they must also deal with a spike in demand for IT services by their end users.

CIOs at top-performing companies are dealing with this issue in part by making quick and deep discretionary cuts across the board rather than through better IT cost-control initiatives, according to a new survey by The Hackett Group.

The survey shows IT budget growth at 1.3 percent

for 2009 to 2011, compared to a historic average of 5.3 percent. At the same time, IT demand will grow at a rate of 8.6 percent. Reconciling greater demand with a smaller budget means IT must deliver higher levels of efficiency and productivity improvement, says Erik Dorr, senior research advisor for The Hackett Group.

CIOs traditionally do this through cost control (such as negotiating better vendor contracts) and discretionary cuts (such as staff reductions). Although discretionary cuts are the most effective way to quickly achieve savings in the face of rapid demand, this tactic comes at a cost, Dorr warns. "Without addressing fundamental productivity issues, these

types of cuts inevitably lead to a degradation of service levels and a reduction in the level of demand that can be met," he says. The survey also found a lack of focus by CIOs on the demand-side of IT services, which creates an opportunity to trim costs there, says Dorr.

Typically, IT met rising user demand by simply handling it, rather than creating processes to prioritize work by its value. However, as CIOs do more with less, developing demand management capabilities becomes critical.

The survey found companies focusing demand management efforts around project portfolios (58 percent) and cost allocation of IT services (37 percent).

—Jarina D'Auria

they said it

"I do not fear computers. I fear the lack of them."

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DAN OVERSEES VMWARE'S EMERGING BUSINESSES, INCLUDING CLOUD COMPUTING AND THE VCLLOUD INITIATIVE, SMALL AND MEDIUM BUSINESS (SMB), AND VIRTUAL APPLIANCES. PREVIOUSLY HE WAS PRESIDENT AND CO-FOUNDER OF A NATIONAL MANAGED SERVICE PROVIDER FOCUSED ON SMBS, AND HELD ROLES AT BAIN & COMPANY, IBM, AND KLEINER PERKINS CAUFIELD & BYERS.

What is VMware's take on the drivers for the widespread adoption of this first stage of virtualization, which is basically server consolidation?

The reason why virtualization has grown so quickly and become such a core part of the overall IT landscape is because of the immediate CAPEX savings achieved from server consolidation. It represents a low-risk approach to immediate cost savings. But what's been interesting in talking to customers who have been on this journey with us is that you hear how they now accept the cost savings, especially on the capital side, as just

I believe the value of virtualization that customers are finding is bringing simplicity back to the IT environment, which is something we really haven't addressed in IT.

status quo. They get excited about the follow-on benefits from a more holistic virtualization strategy, which includes dramatically improving the resiliency of applications running in the data center. All of a sudden, you not only have a more cost effective approach to IT operations, but also better security, better reliability, higher availability and the dynamic headroom for scaling out an application as needed. The conversation moves from a cost conversation to a business benefit conversation, which is that they're better

able to serve the business with the same applications in a non-disruptive manner, without re-architecting IT services on the back end.

One of the biggest challenges, especially in enterprise computing, is dealing with the level of complexity that's been built up over the last few decades. I believe the value of virtualization that customers are finding is bringing simplicity back to the IT environment, which is something we really haven't addressed in IT.

On the availability side we have introduced the vSphere platform, our capability around fault tolerance. It

fully protects your running applications and automatically fails them over. This was once the province of complex custom technology that cost hundreds of thousands of dollars—and we've made it something any customer using industry standard hardware can do for any of their applications. We have really transformed that whole environment.

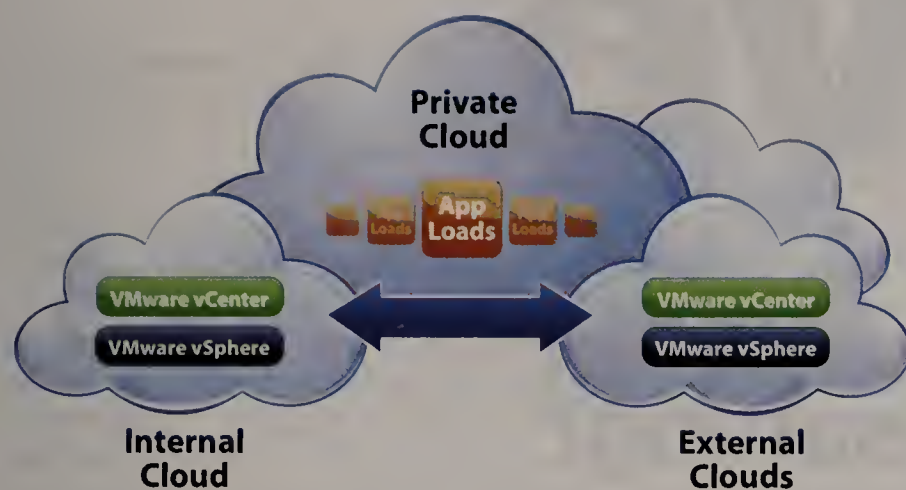
Customers tell us they're saving at a baseline over \$8,000 over 3 years, per virtualized application, across CAPEX, across the real estate savings in their data

centers, across the power savings they get. And that's not even per machine; that's just per application. It's incredibly compelling in this day and age, especially in light of VMware continuing to offer by far the best efficiency and return on a cost per workload or per virtual machine basis.

Can you talk a little bit about how you've addressed that virtualization management challenge?

Our goal is to move the management focus up from the infrastructure level to the application or service level. Normally I'm managing my physical layer, my network interfaces, my storage, my servers, memory capacity ... but now we can virtualize all of that. As a result, IT is literally managing applications, not the lower levels of the actual infrastructure. It's a dramatic simplification of the approach and process of managing an IT infrastructure so you can focus on exactly what the business cares about, which is that service level agreement.

As an example, customers can now take an entire complex multi-tier application from a process of procuring the hardware, layering down the operating system, patching it, installing the different application components, and integrating them—which took months—to being able to provision from a library of applications in a matter of minutes. To a business, that's a fundamental change to the agility of their IT organization.



Is virtualization the enabling technology for the cloud or is it among the enabling technologies? What is the connection?

In general we define cloud computing as on-demand, elastic computing where IT or applications can be delivered as a service without respect to the underlying infrastructure. The interesting thing is that the common perception on how to achieve that is to go to an external provider who manages that underlying infrastructure and delivers the application in a hosted model. It seems to paint a pretty grim picture for all of the current applications running inside of the enterprise data center.

At VMware, we feel that virtualization is the key technology that gives customers that evolutionary path to deliver a federated private cloud—and the first step is to bring cloud computing to their premises. We call this an “internal cloud”. By combining VMware vSphere and VMware vCenter, users create a Cloud OS that can run on or off premise. VMware provides that pragmatic journey to achieving the benefits of cloud computing, but in a way that serves customers’ purposes based on existing applications, infrastructure and data centers. We build a bridge to external enterprise-ready clouds, through our community of over 400 cloud service providers worldwide.

So is it reasonable to ask: “Well, do I even need a third party?”
What we hear over and over again from

customers is they see what Google and Salesforce are doing and they want the elasticity, efficiency, and the on-demand computing seen from those players. But the key thing is they want it for their existing applications or their IT infrastructure, not for just one or two web-based applications.

That’s the transition vSphere as a cloud operating system is looking to enable: enabling customers to broadly take their internal IT, their existing applications, their existing architectures for those applications and in an evolution-

VMware provides that pragmatic journey to achieving the benefits of cloud computing, but in a way that serves customers’ purposes based on existing applications.

ary manner run them in a cloud—whether in their internal cloud or in a compatible external one that allows them to preserve the applications, service levels and policies running in it.

There’s a mandate from the business side that IT must make the most of the resources that they have. This seems like a pretty good way to do that.

Absolutely. Our focus is on working with customers on this virtualization journey to roll that out in stages internal to their existing operations so they’re building toward the full benefits of cloud computing in a non-disruptive manner. And

that journey doesn’t stop at the data center.

One of the largest IT organizations around gave a presentation at our industry conference about an internal cloud they’d delivered. What I found very thought-provoking was how the expectations of internal stakeholders varied. The CIO expected to fundamentally improve the service levels of deploying, scaling and recovery of applications and business services from IT. Customers expected things would come up more quickly because of the resilience of the internal cloud.

It turned out that IT, as an operational organization, improved to drive a great deal of operational efficiencies and cost savings. For the developers who were actually delivering new services to the organization, the internal cloud fundamentally changed their ability to get services up and running—because getting new IT resources to support [deployment] went from days or weeks or months all the way down to minutes.

In Part 2 of our interview, learn how the cloud can be extended outside the organization for even greater business benefits, and how VMware’s solutions can help organizations achieve maximum value from cloud computing.

FOR MORE INFORMATION:

Download a copy of the VMware white paper titled **“Eight Key Ingredients for Building an Internal Cloud”** at www.cio.com/whitepapers/cloud Further information may also be found at www.vmware.com/cloud



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Are You Cut Out for Consulting?

Making the move from CIO to consultant can be a great gig in a tough economy, but it's not right for everyone **BY KIM S. NASH**

Perhaps you've seen the writing on the wall that your layoff is imminent. Maybe you're tired of corporate life and want to ditch The Man and become your own boss. But if you are considering becoming a consultant, listen up: Some CIOs aren't cut out for the job.

If you have power-hungry tendencies, for example, you may want to keep your day job. Consulting differs from being a career CIO in that a consultant doesn't rule an IT department. He or she can offer advice, but not issue directives, says James Sutter, senior partner at IT management firm The Peer Consulting Group, and former CIO of Xerox and Rockwell. In the absence of hierarchical authority, influence and persuasion are now important parts of the job, says Sutter. You need to get things done, much like a CIO does, but you may have to emphasize different skills than you've used in the past.

And if you ask those who've done it, you'll hear that the transition won't necessarily be easy. ►►►



Consulting involves marketing that may not come naturally to everyone, especially when the product you're selling is yourself, says Jesus Arriaga, president and CIO of CIO Strategic Solutions, a consulting firm he started two years ago after CIO stints at Keystone Automotive and Spirent Communications. Arriaga doesn't do much formal marketing by using brochures or advertising, he says. Rather, he does "a lot of networking, talking to a lot of people all the time."

To those who aren't ready for that, he advises signing on with an established IT consultancy with its own marketing function. "Then you can slowly transition into managing your own company and relationships."

When Rick Carney left his CTO post at Barr Pharmaceuticals, he joined Melillo Consulting, an existing firm where he is vice president and general manager. Going this route is less risky than starting a business, Carney says, since you have the benefit of marketing, a sales force and existing customer relationships. However, your ability to build relationships remains critical.

Transforming yourself from a full-time, on-staff CIO into a consultant can unlock career options—especially at a time when budgets are down. According to Martha Heller,

a managing director at executive search firm ZRG Partners and *CIO* columnist (see "A New Career Path for CIOs," Page 34), not many small or midsize companies are hiring CIOs these days but they are willing to hire good consultants for high-level IT strategy and project work.

Be smart when you frame your pitch. "If you consider yourself an innovator and you need financial investment to make things happen, that won't sell now. But if you're a great cost-cutter, that's a skill set to sell," she says. Fashion your résumé to emphasize diverse company and industry experiences, she says, plus past consulting engagements.

Finally, remember to adjust your attitude. As a consultant, you're considered a vendor now, Heller adds. But you do have an advantage: As a former CIO, you can align emotionally with the client because you've hired consultants before and know exactly what bugs IT managers about these outsiders, she says. That may help you win engagements. You want to be clear you're not there to rack up billable hours, she says, but to get a job done.

Senior Editor Kim S. Nash can be reached at knash@cio.com. Follow her at twitter.com/knash99.

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B Wine. Cheese. Labor data. I like to let them all age properly.

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A New Career Path for CIOs

Smart private equity firms are turning to former CIOs to manage IT for their acquisitions **BY MARTHA HELLER**

In the good old days of private equity, firms would make an acquisition, take care of a few little things like management, market, product and brand, and sell the company at a profit. With today's credit crunch, however, they are holding on to their properties longer. Forced to drive out an additional layer of costs, firms are spending more time improving the IT infrastructure of their companies.

The smartest among these firms are hiring a new kind of partner to manage IT for their acquisitions. With a healthy mix of technology, business and financial knowledge, these former CIOs are playing a critical role: They are replacing expensive IT consultants, running IT temporarily, developing competitive IT strategies and providing a consistent standard of excellence across a firm's portfolio.

But the job is not easy to obtain. Many firms continue to rely on consultants and have not yet considered hiring a full-time IT executive. To learn more about the role and how to secure it, I spoke with three CIOs-turned-private-equity-partners.

Getting in the Door

After significant experience as a financial services IT executive, Albert Eng was referred by a contact to Cerberus Capital Management, which hired him as a senior advisor of due diligence, portfolio company turnaround, leadership assessment and operational management.

Eng now works as an industry expert for private equity advisory and post-acquisition turnarounds. He notes that getting in the door as a private equity manager can be the hardest part of the process. It's all about who you know.

"Your entry into a private equity firm will probably be through referrals," he says. "You'll need to establish relationships with firms or with their portfolio companies."

While referrals may get you in the door, you'll also need the right résumé to seal the deal. "Private equity firms with a specific industry investment model will look for a depth of industry experience. Generalist firms will look for candidates with multi-industry exposure," says Eng. "Global delivery experience is also important, as is experience on both the sell and buy sides of IT."

Yet even with the right résumé and referral, the role of private equity IT partner is new enough that interested CIOs may have to sell the value of the position along with their own qualifications.

Craft a Winning Pitch

When marketing your skills to a private equity firm, your best bet is to emphasize cost-reduction experience.

Private equity firms usually hire consultants to restructure and manage IT for their companies. Without someone to provide oversight to the consultants, firms can incur a lot of overhead without seeing a cost-effective IT strategy.

"Firms pay a lot of money to big audit firms that check that the numbers are documented but do not ask where the data comes from," says former Lucent Technologies VP and CIO Bill Stuckey, now at Arsenal Capital Partners. "When firms are strapped for cash, they need to make sure their consultants do deeper dives on the data to find new ways to drive cost out of the business."

The role of private equity IT partner is new enough that CIOs may have to sell the position along with their own qualifications.



Quick Fix ■■■ Fight Plan: Effectively managing conflict takes practice because it's counter intuitive to our gut responses. Our instinct is to go into fight or flight mode, says Lynne Eisaguirre, author of *The Power of a Good Fight* and president of human resources consultancy Workplaces That Work. Neither approach is particularly productive at work. Instead, she suggests participating in a conflict training course. Encourage your IT managers to do the same.

While Stuckey's role "is to help assure that our companies all have technology strategies and platforms to support the business," he also makes sure his vendors are delivering only the most valuable information.

"I put together our requirements, find outside groups that can perform consistently for a competitive price across the portfolio companies and direct their efforts," says Stuckey. "This way we get consistent information and support at a reduced price."

Know What You Want

Before you start working your networks, you may want to think carefully about some of the differences between your CIO role and this new one.

As CIO of J. Crew and Vitamin Shoppe Industries, Mike Morris had worked for companies that were bought by private equity firms and became interested in the other side of the fence.

He learned that North Castle Partners was looking for an executive to help with IT strategy and operations improvement. Morris is now an operating advisor at North

Castle, responsible for "advising each of the deal teams on the IT infrastructure of potential acquisitions, incorporating IT-restructuring activities into the 100-day plan and making sure we invest the right amount of money in IT."

Unlike his former CIO roles, Morris handles many more aspects of this job himself. "I'm in a boutique firm of 15 people," he says. "I don't have a staff to delegate to: I do all of my own research and put together my own set of due-diligence tools."

For Morris, the entrepreneurial element to his role is extremely gratifying, but he recognizes the shift it may represent for some CIOs.

"North Castle's approach is in developing collaborative partnerships," he says. "We focus on small companies that I consider to be my customers. I need to listen to them and not say, 'My way or the highway.' They are counting on us to help them achieve their dreams."

Martha Heller is managing director of the IT Leadership Practice at ZRG, an executive recruiting firm. Reach her at mheller@zrgroup.com or read her columns at www.cio.com/author/41283.

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What Would ELEANOR ROOSEVELT Do?

Years before she helped Franklin D. Roosevelt win four presidential campaigns and became "reluctant First Lady" in the 1930s and 1940s, Eleanor Roosevelt was an outspoken social reformer. Her legacy includes fighting for women's, civil and human rights in the U.S. and, via the fledgling United Nations, the world. J. Edgar Hoover considered her dangerous; the FBI file on Roosevelt is one of its thickest.

Roosevelt prided herself on a forthright and compassionate management style—one that, in these trying economic times,

would likely advance not only her career but those of her staff. We asked Allida Black, director and editor of The Eleanor Roosevelt Papers Project and a research professor of history and international affairs at George Washington University, to imagine how Roosevelt might manage today.

Question: As a senior executive, how would you lay off staff?

Answer: With great sadness. I would have done all I could to keep people employed. I'll have discussions with each individual

to explain the downsizing. I'll help them secure additional work by writing letters of reference and making phone calls. I appreciate the loss of friendships and the pressure it puts on employees to do more work with less staff. I would not expect staff to do anything I wouldn't do myself.

Question: What do you do when you disagree with the CEO's plans?

Answer: In a board or staff meeting, I would speak up. If it was a public announcement, I would not leap to criticize publicly. I would go to the CEO and say, 'We need to think about this. I disagree and here's why.' Depending on how significant the disagreement was, I might go public. I have done this with major corporations, labor groups, the U.N., with Truman and FDR. If the disagreement was over a fundamental value where, when I did a gut check, I couldn't go there, I'd resign. I resigned from the Daughters of the American Revolution over Marion Anderson. I'm not shy about making my opinion known but I always go to the person first. —Kim S. Nash

PHOTO BY CORBIS

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I need to control labor costs in these tough times.

- A** Yes.
- B** Control costs? Hell, we're waiting on a government bailout.

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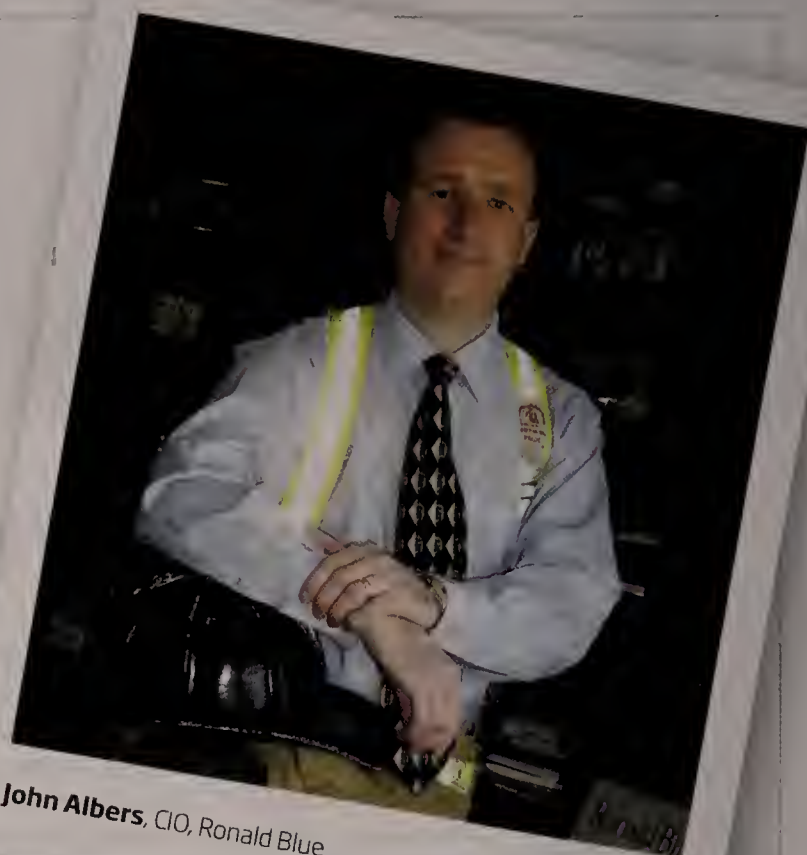
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TIME & ATTENDANCE SCHEDULING ABSENCE MANAGEMENT HR & PAYROLL HIRING LABOR ANALYTICS

From Computers to Crime Busting

BY CINDY WAXER



John Albers, CIO, Ronald Blue

When a high-speed chase on an interstate highway in Alpharetta, Ga., resulted in the arrest of a suspect with seven felony warrants, residents credited the work of a fast-acting police officer. Little did they know that a mild-mannered CIO was also to thank for nabbing the dangerous offender.

Meet John Albers, CIO at Ronald Blue, a financial management firm with approximately \$5 billion in investment assets. As CIO, Albers and his team ensure around-the-clock IT security, network operations, software development and media and project management. But that hasn't stopped this volunteer firefighter from helping the Alpharetta Department of Public Safety (ADPS) roll out an arsenal of innovative crime-fighting tools.

"I've always had a knack for technology, but it's in my blood to serve other people and give back," says Albers. In 2006, he combined these passions by helping launch the Alpharetta Public Safety Foundation (APSF), a nonprofit group to raise funds, create programs and offer technical assistance to improve public safety.

Albers and the APSF have spearheaded several high-tech projects including the Mobile Plate Hunter 100, which nabbed the interstate-fleeing suspect. The MPH 100 is a \$25,000 computer imaging system with infrared cameras that are mounted on a police car. The portable unit captures 1,500 license plates per minute and cross-references them against five national law enforcement databases. If there's a match—

red flags range from stolen vehicles to suspended drivers licenses—the system notifies the police officer. Only after Albers and other foundation members personally evaluated and tested the device did the APSF purchase it on behalf of the ADPS. He still assists and troubleshoots any network challenges that arise from daily updates to the system's database.

Albers also lent his IT expertise to the creation of Alpharetta's 911-Command and Control Center. The center grants emergency personnel access via a virtual private network to city security cameras. Albers installed and integrated a string of the digital cameras so law enforcement officials can better plan and execute emergency operations. "John's expertise in the IT field has been a tremendous help," says George Gordon, executive officer of public information at ADPS.

You'd think a financial services CIO would have his fill of putting out fires. But not Albers. "I'll do whatever it takes and whatever my day dictates," he says. "Whether it's being a fireman, a CIO or a crime fighter."

Cindy Waxer is a freelance writer based in Toronto.

HOW YOU CAN HELP

You don't need a knack for nabbing criminals to put your IT powers to good use. Many charitable organizations can benefit from your IT expertise.

United Way
liveunited.org

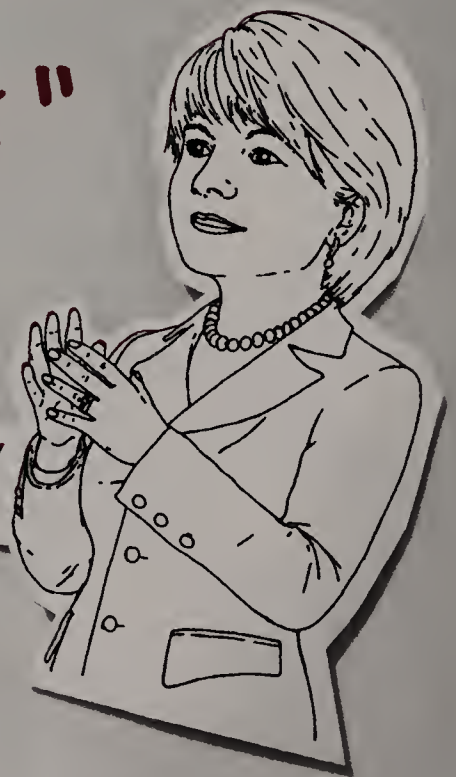
Feeding America
feedingamerica.org

The Salvation Army
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Save the Children
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WITHOUT CUTTING
CUSTOMER CARE"

Angela Braly
CEO, WellPoint



- Consolidating technologies can help lower I.T. costs without compromising service.
- Ask for *people_ready* optimization solutions.
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Because it's everybody's  business

Leadership development doesn't stop when the going gets tough. If anything, investing in the next generation matters now more than ever.

40

If there was ever a more difficult time to

make leadership development a priority, you'd have a hard time convincing most IT executives of it. In the aftermath of the global economic meltdown, CIOs face a long list of challenges—from cost cutting and customer demands to strategic planning and successful innovation—and the resources available to accomplish them continue to contract.

Executives across the board are downgrading their concern about the pipeline of top talent in their organizations. Corporate leaders ranked pressure to cut costs (83 percent) as their toughest business challenge, according to recent research from Personnel Decisions International, an HR consultancy. Talent management fell to dead last, with just five percent of survey respondents citing loss of leaders in key areas or insufficient talent as a concern.

Indeed, it would be easy for CIOs to shift into autopilot when it comes to developing the next generation of IT leaders. Problem is, say management experts, that without a guiding force, leaders will self select—and they may not be qualified for senior roles.

“Leaders are developing whether you want them to or not. The question is: Do we want to be aware of that and guide that in a conscious way?” says Karen Sobel-Lojeski, visiting assistant professor at Stony Brook University’s department of technology and society. “We need to pay more, not less, attention to leader development because leaders are coming up anyway.”

“The trick,” says F. Warren McFarlan, professor of business administration at Harvard Business School and author of numerous books on IT management and strategy, “is to be able to identify the remarkable people in the organization while getting the work of the business portfolio done. You’ve still gotta get the laundry out.”

The CIOs who identified, mentored and groomed *CIO* magazine’s 2009 Ones to Watch honorees (Read “Tomorrow’s Leaders,” Page 46) are flat-out focused on developing the next generation of leaders (and the generation after that) while still meeting the myriad challenges of the modern-day IT department. And while there’s a lot of buzz about how to bring up Gen X or Gen Y (Read “Bringing Up Gen Y,” Page 43), the IT leaders we spoke to believe that leadership development is leadership development and that focusing on age or any other differentiating factor is not productive.

“It’s simply a matter of priority,” says Amtrak CIO Ed Trainor, whose staff includes a Ones to Watch honoree. “You must make the investment or else you will lose the good people.”

CIOs should heed Trainor’s advice. Many aspiring CIOs are dissatis-



FORGING GOOD LEADERS in BAD TIMES

BY STEPHANIE OVERBY



Amtrak CIO **Ed Trainor** (right) manages the risk of giving key assignments to IT leaders such as Ones to Watch honoree **Dee Waddell** by "moving them judiciously into more responsibility."

fied with their CIO's approach to developing talent, according to an exclusive new survey by *CIO* magazine. Fewer than half of respondents believe their CIO is "very committed" to developing internal leaders while 34 percent say their CIO is "somewhat committed." In addition, more than half gave their IT bench a weak rating, which suggests a need for more leadership development by the CIO. The survey polled 90 aspiring IT leaders, 80 percent of whom are Gen Xers now working their way to the top.

Clearly, CIOs should carve out time to devote specifically to leadership development throughout their organization. "But there's also a mind-set that has to change," says Sobel-Lojeski, whose book, *Leading the Virtual Workforce: How Great Leaders Transform Organizations in the 21st Century*, publishes in August. "You must always be in leadership-development mode. You never know who may turn out to be the next leader."

Smart CIOs see leadership development moments in even the mundane. "I try to take advantage of everyday events—problems or personnel issues—and turn them into real-time learning opportunities," says Toyota CIO Barbra Cooper, who has two Ones to Watch honorees as direct reports. "I just never stop trying to be a leadership developer. I am thinking about it all the time." Such coaching by senior staff is seen as a "very effective" form of training by 61 percent of would-be CIOs, according to

our survey.

IT executives who make the effort to cultivate their up-and-comers reap results not just in the future but in the harried here and now. "Balancing competing demands is an important part of the job of any IT leader in a complex environment. I do everything I can to avoid the 'tyranny of the or,' like you can have either peak productivity *or* learning and growth," agrees American Red Cross SVP and CIO Mark Weischedel, whose organization also claims a Ones to Watch honoree. "I firmly believe that—on the whole and over time—you can have both. If people like and believe in what they're doing, and are stimulated by new challenges, they'll perform better."

CIOs for Tomorrow

Today's CIOs have to be a little clairvoyant, not only transforming their best and brightest managers into leaders, but also preparing them for challenges to come. The one bright spot in the torrent of bad economic news today is that it's made reading those tea leaves a little easier.

Ones to Watch honoree Risa Fogel was former vice president of business relationship management at Realogy, the \$4.7 billion parent company of real estate franchises Century 21 and Coldwell Banker whose revenues have sunk 27 percent since 2006. But Fogel, now senior managing director of business relationship management at Cushman & Wakefield, has a good handle on what she'll face as a CIO in the next few years. Everything that today's IT executives are confronted with—squared.

"Future CIOs will be challenged with many of the issues facing today's leaders, but in the context of how to guide their business to recovery," she says. "They will be particularly challenged with driving innovation. [But] encouraging new investment and risk taking will need to be carefully couched in terms of how it will deliver short- and long-term growth."

The successful 21st century CIO will deliver on multiple dimensions. "The CIO's role will be to appropriately deliver innovative services that align with corporate strategy and to balance—in a cost- and risk-sensitive way—the work of inside staff and outside staff," says McFarlan.

That's just part of what CIOs must accomplish to make it today, says Weischedel, who took on the top IT job at the Red Cross last year. "Surviving and prospering as a CIO will require anticipation and agility like never before. Experience working in a diverse set of responsibilities, organizations, structures and situations is the best preparation," says Weischedel, whose own career spans a half-dozen industries and situations ranging from aggressive growth to downsizing and divestiture. "Especially in times like these, drawing on past experiences makes a huge difference."

Old-Fashioned Leadership Training

For all IT management's increased complexity, some of the most rewarding leadership development experiences (Read "Oppor-

tunity Knocks," Page 56) cited by tomorrow's CIOs are tried and true.

Ones to Watch honoree Jeffrey Modell values his time at the Center for Creative Leadership. He took a CCL class, "The Looking Glass Experience," which involved taking various assessment tests (e.g. Myers-Briggs, 360-degree reviews), a six-hour simulation of a stressful corporate situation and tons of feedback. Modell, who served as interim vice president of IT infrastructure at the Red Cross before moving to the International Monetary Fund as division chief of IT client services in April, used to avoid feedback for fear of a bad review. "I gained an appreciation of the value of feedback and introspection," he says. Today he solicits feedback from his manager, employees and peers, provides feedback regularly to his own staff and coaches others on how to give and accept feedback. He has even sent his own staff to CCL classes.

Ones to Watch honoree Dee Waddell credits personal and business experiences along with management education (he has an MBA in strategic management and is working on a management doctorate) with helping him overcome his own weaknesses. "I have had deep experience in many of the areas I am leading, so I have no issues in rolling up the sleeves and taking action. The biggest challenge I have is sometimes I can move too fast and not ensure everyone is on the same page before moving forward," says Waddell, Amtrak's group information officer for marketing, sales and customer service. He learned the importance of collaborating with others through formal and informal meetings and regular check-ins as well as by following up with key constituents, even when his impulse is to barrel ahead.

At Toyota, Cooper encourages enrollment in executive MBA programs and has a career development plan for her staff that requires certain courses, conferences, speaking engagements

and position rotations. She tailors the activities to the employee. Toyota honoree Zack Hicks came from the business side, so his focus was on gaining confidence and expertise with technology and technical staff. Toyota's other honoree, Karen Nocket, had a solid IT background but needed to shed her geek image and get more business exposure.

Not all traditional leadership training must be bought and paid for—thankfully. Fogel attended executive management programs and the Society for Information Management's regional leadership forum, which provided a strong foundation for working with the business. "Developing the ability to effectively communicate across all levels of the organization has been crucial to my success and is something I try to encourage for my staff," she says.

While at Realogy, Fogel says she offered her staff "the ability to step into unfamiliar situations, using a lot of one-on-one coaching and immediate feedback." She also used the company's business challenges to talk about "the difficult decisions leaders must make to adjust to a changing environment."

For all the formal management training Hicks has under his belt, he credits his one-on-one time with Toyota CIO Cooper as perhaps his most educational. "My strongest mentor and teacher has been Barbra. She's got laser-beam-like insight into performance and corporate cultures, and she cuts through the B.S. with a machete. She gives strong, immediate and actionable feedback and insight," says Hicks. "I try to do the same with my staff."

Business Boot Camp

Amtrak's Trainor is 65 years old. He's been a CIO for 25 years at four companies in four different industries. He's got an MBA with a specialty in information technology. But the best thing

Making Gen Y Leaders

For the first time ever, IT organizations are staffed by four distinct generations of workers—the Silent Generation, Baby Boomers, and Generations X and Y. And while most leadership development attention is focused on handing the baton to Gen X standouts, most of the anxiety is about managing Gen Y.

"There's this perceived technology edge

that young people have and this sense that they've learned to live differently because of it," says Dr. Karen Sobel-Lojeski, visiting assistant professor at Stony Brook University's Department of Technology and Society.

And there may be leadership deficits that an organization's youngest workers need to overcome. "Their ability to multitask, while certainly useful, could prove a weakness as they are asked to focus on business or personnel

problems that are not easily solved in a short time frame," says Ones to Watch honoree Risa Fogel, formerly of Realogy and now at Cushman & Wakefield.

Nonetheless, Ones to Watch honorees—charged with nurturing their own successors from among the millennials—see promise. "This generation can have a significant impact on the continued convergence of the IT organization with the business," says Gen Xer and Ones to Watch

honoree Dee Waddell of Amtrak. "They will become the technology-savvy business leaders of the future."

"Generation Y leaders could have a positive influence on the culture of a workplace based on their enthusiasm for friends and collaboration," adds Fogel. "Their expectations for immediate results may result in great innovation, particularly since they don't have the same imaginary boundaries as some earlier generations."

CIOs and their man-

agers must develop the next generation of leaders "in much the same way we did 20 years ago by giving them practical experience right out there on the battlefield," says F. Warren McFarlan, professor of business administration at Harvard Business School.

And now is the perfect time to hand real responsibilities and meaningful leadership experiences to Gen Y as CIOs are tasked with doing more with fewer staff members. —S.O.

he ever did for his career, he says, was getting out of IT to spend some time in the business ranks.

It's no secret that an understanding of and ability to work with the business is a key success factor for IT leaders. In fact, aspiring CIOs say they consider strategic and business-focused skills to be key in getting to the next level, according to our survey.

"[The lack of] a deep ability to understand, relate to and communicate with senior people outside of IT is where a lot of IT professionals have gotten themselves in trouble," says McFarlan. But letting go of your best employees isn't easy. After all, there's a very real chance they may never return. But "the business" remains one of the best training grounds for IT leaders.

Ones to Watch honoree Kevin Cooke joined the Department of Energy right out of school, rising to associate CIO during a potentially contentious IT centralization effort. Communication and collaboration with the business units has led him to some early success. Naturally, Cooke wants to instill those same skills in his team. So he created an organizational development program with a budget for professional training, a focus on team- and communication-building exercises, and—most importantly—opportunities to cross-train in other departments. Dubbed "details," these six-month to one-year assignments send IT employees to another DOE office or program temporarily.

During lean times, it can be difficult to give up even one prized employee for six months. But shorter-term business-IT exchanges can have lasting effects. "Earlier in my career at Realogy I had the opportunity to travel with my business customers, which helped me understand their business strategy and challenges," says Cushman & Wakefield's Fogel. "It [also] helped them develop confidence in my ability to help solve business problems."

When Amtrak CIO Trainor brought Waddell in to interview for his role to help Trainor rehabilitate the department, he knew he needed someone capable of more than making the IT trains run on time. Waddell had been responsible for a business unit with revenues of nearly \$3 billion and had held senior business and IT leadership positions, but Trainor wanted to check his business credentials with Waddell's business partners, which was not unusual to do with a new hire. "He was very wise in having me interview with most of the senior business leaders I would be working with and supporting," says Waddell. Since he hired Waddell, Trainor has asked him to work closely with the business, giving him the opportunity, as part of a combined marketing and IT team, to present to the board of directors in March.

When the Red Cross's Modell was employed by the *Washing-*

ton Post, he worked closely with a vice president he was charged with supporting. She asked him to develop an IT road map for the business. But both quickly realized there was no clear business strategy on which to pin a technology plan. So together they built an IT-business strategy and a supporting IT road map. "I had always been a bit skeptical about the actual impact that the development of a vision could have," admits Modell. "By seeing the entire team rally around the direction and by participating in decisions to adjust priorities and kill projects, I gained an appreciation for their value."

At the Red Cross, he led his own leadership team with developing a mission, vision and road map. And while at the *Post*, he insisted on at least a full day each year in a business role. "There is great advantage to requiring all IT staff to [work] side-by-side with someone in the business," says Modell, who once spent a night distributing newspapers to understand part of the *Post's* business model.

Freedom to Fail

Some future leaders are easy to recognize. Amtrak's Waddell achieved the rank of Eagle Scout by 13. He helped to set up an Internet-like computer messaging system when he was 14. He earned his real estate license at 18. And at 19, he licensed designs



Department of Energy CIO **Tom Pyke** (left) and Ones to Watch honoree **Kevin Cooke** believe in giving staff challenging assignments to stretch their leadership abilities.

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from his T-shirt business to a national, multimillion-dollar company.

Still, Waddell insists he is a business and IT leader made, not born. And his most formative experiences have been, by most measures, failures.

After getting his MBA, he jumped at the chance to work with an Internet start-up at a Midwestern venture capital firm that went through an IPO, but eventually went out of business. "I find myself fortunate that I escaped without much harm, while learning that business is about bottom-line financial results—not the euphoria of high-growth website clicks," Waddell says. He joined Motorola, leading the development of a Web-based product that would enable the equipment manufacturer to bypass wireless carriers and sell to consumers directly. That never happened. But Waddell racked up significant experience as a corporate director for a Fortune 50 company. Then it was on to United Airlines, where he helped lead development of a new joint venture in the customer loyalty space. But after less than a year, the venture's partner panicked. United filed for Chapter 11 protection later that year. Waddell eventually left, but not before taking over the P&L for United.com and developing a reputation for driving strong product strategy and delivering projects with significant benefits amid company turmoil.

Corporate failures were leadership-building exercises that helped Waddell deal with his current challenge—turning around an IT department at Amtrak, where the business loathed IT and had built up the shadow IT organizations to prove it. He credits his success in rebuilding the broken business-IT relationship partly to his boss. "A key factor is that [CIO] Ed [Trainor] has created a safe environment where I am not afraid to take calculated risks," Waddell says. "When issues arise, he and I work together and focus on how to address and resolve them."

Trainor manages the risk of giving key assignments to Waddell and his other top leaders through "training and mentoring, and moving them judiciously into more responsibility," he says.

Hicks wasn't the logical choice to turn around a Toyota dealer extranet project that was years late, millions of dollars over budget and lacked a business sponsor. But Hicks, since elevated to vice president of administrative services, turned out to be the man for a floundering project. CIO Barbra Cooper didn't want just another IT project manager to take the wheel, so she took a chance on Hicks.

"Barbra liked that I didn't approach this challenge with the technological solutions

TOMORROW'S LEADERS

2009 Ones to Watch Awards

Smart leaders invest now for the future. And they don't stop making that investment when times get tough.

Honoring that steadfast commitment to leadership development is at the heart of the Ones to Watch Awards, presented annually by *CIO* magazine and the CIO Executive Council. Through this award, we recognize the next generation of IT leaders and the CIOs who've never stopped investing in their talents. With our Standout awards, we highlight those Ones to Watch honorees who have excelled in leading innovation, business strategy, project execution, team building or organizational change.

The 25 men and women who comprise the 2009 Ones to Watch honorees truly epitomize the spirit of business technology leadership. Congratulations to all of our honorees and their CIOs.

Mark Abbott, 36
SVP for Strategy and
Technology Alignment
Roymond James Financial

Philip Alberta, 38
VP, IT Business and
Technology
Tiffany & Co.

Richard Bailey, 54
Deputy CIO
*State of Connecticut,
Dept. of Information
Technology*

Sharon Cates-Williams, 48
Deputy CIO IT Delivery
Services
*New York State CIO/
Office for Technology*

Kevin Cooke, 39
Associate CIO, IT Corporate
Management
*U.S. Department of
Energy*

Ken Corless, 44
Executive Director of
Business Applications
Delivery
Accenture

Risa Fogel
Senior Managing Director
of Business Relationship
Management
Cushmon & Wakefield

Tracy Foy, 42
VP and CTO
HealthSouth

Vipin Gupta, 40
SVP, Business Information
Officer

Notional City
Standout Winner:
Innovator

Bruno Hall, 41
Deputy CIO, Americas
ECI Telecom

Zack Hicks, 45
VP, Administrative
Services
Toyota Motor Sales, USA

T.X. Ho, 51
Senior Director of Global
Applications
Sybase
Standout Winner:
Project Driver

Harold Eugene (Gene) Hopkins, 50
Senior Director, Enterprise
Applications
EMCON Technologies

Debbie Jowers, 52
Administrative Director of
Applications
Texas Health Resources

Jay Kerley, 42
VP, IT Production Services
and Solutions
Management
Applied Materials
Standout Winner:
Change Agent

Craig Lynch, 38
Enterprise Information
and eLearning Services
Officer
Chicago Public Schools

Vito Melfi, 52
VP, IT Operations
Gevity

Jeffrey Modell, 40
Division Chief, IT Client
Services
*International Monetary
Fund*

Karen Nocket, 47
Divisional Information
Officer, Automotive
Systems
Toyota Motor Sales, USA
Standout Winner:
Business Strategist

Jennifer Sanchez, 49
IT Manager, Section Chief
*Federal Bureau of
Investigation*

Ed Smith, 43
SVP, Global Internet
Solutions
Equifax

Chris Tomlinson, 32
Director, Radiology
*Children's Hospital of
Philadelphia*

Dee Waddell, 37
Group Information Officer,
Marketing, Sales and Customer
Service
*Amtrak (Notional Railroad
Passenger Corporation)*
Standout Winner:
Team Builder

Gary Widiger, 44
Director, Enterprise
Architecture
UniGroup

David Zanca, 51
SVP, E-Commerce
Technology
FedEx Services

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first. I approached it from a more management-science perspective—financials, people and process—versus relying on what the current Gantt chart said.” Hicks turned the project around with high satisfaction rates at headquarters.

Indeed, McFarlan says, giving budding leaders project management control of ever-larger programs is critical in preparing them to take over the top IT spot. Heading an enterprisewide project was cited by 77 percent of survey respondents as a “very effective” form of leadership training.

That can be trickier on the infrastructure side. Before Modell took on the customer support role at Red Cross, he focused solely on project management, strategy and software development. Two years ago, he decided to challenge himself and applied for an infrastructure role for which he had no experience. To his surprise, they gave him the reins of the 245-person group with a \$30 million budget. “I appreciate that Mark [Weischedel] and the previous CIO took a risk and gave me this opportunity,” Modell says. “In this position, I’ve been able to pull together all of my learnings and try them out on a larger scale.” Modell transformed the department from geographically to competency-based, drove a 66 percent reduction in average IT case closure time and a 96 percent decrease in case backlog, and led the development of an Information Technology Infrastructure Library (ITIL) incident-management process.

Weischedel says he can’t take a chance on just anyone. “There is a balance between

‘show’ and ‘grow’ in an assignment. Overextending someone’s responsibilities beyond their performance capabilities is risky and can be a setup for failure,” he says. “I don’t ever want to put someone in a job they can’t succeed in doing, so it’s always a judgment call.” Modell applied the experience to his own group at Red Cross. “As I’ve gained an understanding of my staff’s talents, I’ve looked for opportunities to stretch them,” he says.

That’s an area of difficulty for the DOE’s Cooke who knows his staff needs stretch assignments to grow. “In the past, I’ve

been guilty of taking on too much personally and not delegating enough to my direct reports,” Cooke says. “While it may take more time initially to delegate to staff and guide them, in the long run it’s a win for all involved.” As his boss, Department of Energy CIO Tom Pyke says, “There is always a risk when delegating work, especially when stretching individuals beyond their past experience. [But] this is a key part of learning to be a manager in any area, including being a CIO.”

Pyke is trying to practice what he preaches with all of his staff, not just the standouts. “It’s always important to challenge individuals—all employees, not just those who have significant potential as future leaders,” says Pyke. “As these individuals grow, they learn to apply a similar model as they mentor others who are more junior than themselves.” **CIO**

Stephanie Overby is a freelance writer based in Boston.



How We Chose the Winners

To qualify for the 2009 Ones to Watch award, candidates had to be nominated or sponsored by a CIO. A 29-member panel of working CIOs, who are all members of the CIO Executive Council, reviewed and rated the applications. Three CIOs scored each nominee on several criteria, including expertise in a range of business and IT functions, experience in leading a large project or conceiving a new business product and ability to turn around a troubled project or organization. After a final due-diligence review by CIO’s editors, we chose the 25 Ones to Watch.

All nominees were critiqued by three members of our judging panel who participate in the CIO Executive Council.

Michael Abbene

VP and CIO
Arch Cool

Jackie Barretta

VP and CIO
Con-Woy

Hardik Bhatt

CIO
City of Chicago

Bill Blausey

CIO
Eaton

Mark Brown

CIO
General Growth Properties

Jim Burdiss

VP and CIO
Affinio Group Intermediate Holdings

Dedra Cantrell

CIO
Emory Healthcare

Andres Carvallo

CIO
Austin Energy

Roman Coba

CIO
McCain Foods

Robert Fecteau

CIO, Customer Solutions Group
BAE Systems Information Technology

John Golden

EVP and CIO
CNA Financial

John Goslin

CTO
Boys & Girls Clubs of America

Rick Hopfer

Senior VP and CIO
Sony Pictures Entertainment

Jeffrey Kessler

CIO
Dana Forber Cancer Institute

Ron Kifer

Group VP and CIO
Applied Materials

Randy Krotowski

CIO, Upstream
Chevron

Robert Lieberman

Senior VP and CIO
Centro Properties Group

George Lin

CIO
Dolby Laboratories

Brian Lurie

VP of IT
Stryker Orthopaedics

Ahmed Mahmoud

CIO
Advanced Micro Devices

William McCreary

CTO
NSG

Helen Polatajko

Senior VP and CIO
CIBC Mellon

Marie Pretorius

VP of IT
Dole

Rebecca Rhoads

VP and CIO
Roytheon

Karan Sorensen

CIO and VP of IT
Johnson & Johnson Pharmaceutical Research & Development

Thomas Sneed

CIO
Morroth Oil

Don Sturdivant

CTO
Square 1 Bank

Dave Wagner

CIO
ON Semiconductor

Gordon Wishon

CIO, Associate VP and Associate Provost
University of Notre Dame



Virtual Tape Solutions:

Reining in TCO in Turbulent Times

Gary Brown

VICE PRESIDENT OF STORAGE, FORSYTHE

As vice president of storage at Forsythe, Gary Brown is responsible for developing and implementing client solutions in the area of optimized information management and storage, including tiered storage, backup and recovery, virtualization and storage networks.

Whether it's time for a technology refresh, a lease renewal or simply cost cutting, virtual tape solutions are breathing new life—and dramatic savings—into mainframe IT shops. Gary Brown, vice president of storage for Forsythe, a Skokie, Illinois-based IT infrastructure integrator, explores the potential net gain of “going virtual.”

Why are virtual tape systems so attractive today?

Traditional tape is slow, so IT shops typically look at virtual solutions—such as EMC's Disk Library for mainframe (DLm)—to improve performance. That's a compelling reason to invest, but deeper digging reveals other reasons, such as risk mitigation. Tape isn't the most rugged medium, can be lost and is difficult to

ing to storage and recall. That adds up to a lot of human intervention and fees. Third, mainframe processing is expensive; we're talking tens of thousands of dollars per MIPS (million instructions per second), with mainframe MIPS upgrades costing tens of thousands. Fourth, recovery operations become a drain, because you have to recall, ship and load the tapes. Finally, tape formats change roughly every two years and conversion to any new format is a time, resource and money drain.

Where do virtual solutions offer the most substantial savings?

Virtualization makes a difference in all five areas. Virtual solutions such as the EMC DLm are one-tenth the footprint; a 1,000-square-foot tape environment

library approach—across all five savings areas, with telling results. In floor space, the company recoups roughly \$450,000. There is zero media handling with virtual tape, which cuts \$680,000. It also saves \$300,000 and \$400,000, respectively, in MIPS and recovery. And the company eliminates another \$50,000 in migration costs. Of course, there are costs associated with a virtual system setup and initial migration, and virtualization can use more power. With all that considered, a company still sees a net savings of \$1.75 million.

How can Forsythe help?

Forsythe helps you validate “going virtual” by running two parallel tracks—economic and technical. You want to look at TCO reductions, ROI and payback period, for which Forsythe has built specific economic models. At the same time, the technology needs to fit. So we collect data to size the DLm appropriately, make sure it's timed properly and determine what's needed for integration and migration. Once these tracks are married together, you should be able to stand behind your technology decision and present the necessary economic benefits.

“Virtual tape ‘future-proofs’ us from the media migration problem, for untold savings.”

restore. But with virtualization, it's all on disk, so there's no risk of breakage or loss. Additionally, with the EMC DLm, the disk is constantly scrubbing, checking and protecting itself, so the data is available when you need it. Most profoundly, though, virtual tape solutions eliminate the media handling element, which is expensive and creates risk.

Where are the greatest costs in tape management?

With traditional tape, there are five major areas for spending. First, these systems use a lot of costly floor space. Second, you have an immense amount of media handling, from purchasing and process-

ing to storage and recall. That adds up to a lot of human intervention and fees. Third, mainframe processing is expensive; we're talking tens of thousands of dollars per MIPS (million instructions per second), with mainframe MIPS upgrades costing tens of thousands. Fourth, recovery operations become a drain, because you have to recall, ship and load the tapes. Finally, tape formats change roughly every two years and conversion to any new format is a time, resource and money drain.

Can you cite dollar savings?

We've compared the costs associated with a midmarket environment—pitting traditional tape against an EMC DLm virtual

FOR MORE INFORMATION:

Check out “Go Virtual for Storage—and Cut Costs” at www.cio.com/whitepapers/forsythe and “The Virtual Solution” at www.cio.com/webcasts/forsythe/vts

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CIO 100 Symposium & Awards, August 23-25



CIO: The Year Ahead, November 8-10

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SOUNDING BOARD

Attracting the Next Generation

To begin filling the gaps that retirement will cause, CIOs need to make IT careers exciting for the youth in their communities

BARBARA KOSTER, PRUDENTIAL FINANCIAL

FIND A PARTNER

Getting kids excited about working in IT is a personal passion for me, and I think that's necessary for any CIO who gets involved—you have to put a lot of effort into it outside of your professional capacity. The return comes when you open up the students' eyes to the fact that technology isn't just coding—there are so many other jobs involved in creating new applications and solutions. That's when they get excited.

You don't have to shoulder the whole burden. There are programs and people to partner with; you just have to find them. Several members of my management team were attending graduate classes at Columbia University. If they hadn't brought me the ideas of one of the professors for getting kids into the IT workforce, we never would have become partners. Columbia couldn't do it on their own; they needed companies ►►►

The CIO Executive Council is a global peer advisory service and professional association of more than 500 CIOs, founded by *CIO*'s publisher. To learn more, visit council.cio.com.



Barbara Koster, SVP and CIO, Prudential Financial



Eric Hungate, CIO, Texas Association of School Boards



Jesse Carrillo, VP and CIO, Hines

to help. We were the first to sponsor the university's Workforce Outsource Services program, which provides high school students the opportunity to attend a 16-week certification program. It includes working part time for partner companies in New Jersey and New York (learn the details through the Connect box at council.cio.com).

The program is now a key component of our IT recruitment strategy, helping build our pipeline across the company. The interns are good at coming up with ideas for how to solve business problems with technology, but the best part is the opportunity we give young people to have a future career in IT.

ERIC HUNGATE,

TEXAS ASSOCIATION OF SCHOOL BOARDS

INFLUENCE EDUCATION AS A LOCAL EMPLOYER

The sweet spot for CIOs to hit is the middle-school level. Get involved with your local schools' curriculum boards and help develop classes that will grab the attention and imagination of kids. By the time they're in eighth grade, they need to know that the technical field is interesting; otherwise, many of them will fall behind and won't have the skills or knowledge to decide later that they want to be in IT. I'm working with several schools now that are developing programs that will prepare students for pursuing technical degrees, which could serve as models across the country.

By helping to develop technology-related curricula with practical applications, CIOs can help bridge the significant divide between the middle schools and high schools, and the colleges and universities. Too many in higher education look down on what the middle and high schools are teaching. But if CIOs were to step in as local employers and industry leaders—by setting their stamp of approval on the curriculum as one that will prepare kids to be hired out of college—that could make a huge difference.

JESSE CARRILLO, HINES

PREPARE THEM FOR THE WORKING CULTURE

What first made me excited to work with Genesys Works in Houston was its summer boot camp, an eight-week training program for inner-city students. While they learn the technical skills, they also learn about workplace culture and how to be a member of a corporate team, which are skills that aren't easy to learn in a classroom and will serve them for life. It's an eye-opening experience for most of them.

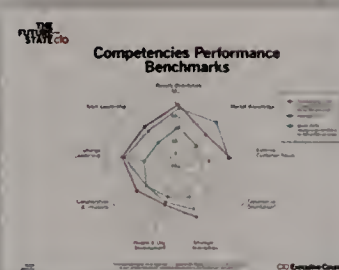
Because they have that preparation, when I bring a student in as an intern, they immediately become part of the team. They're on project teams and interacting with users, and we try to get rid of that "intern" label as soon as possible because they are full contributors for the time they are here.

Genesys Works is now expanding into other cities, starting with Minneapolis-St. Paul, and their model is one anyone around the country can use to do more than just teach kids about technology opportunities.

download

Assess Your Business Leadership Skills

What: The Executive Competencies Assessment tool was adapted by the CIO Executive Council from a talent appraisal used by Egon Zehnder International. Use it to rate and benchmark your proficiency in nine leadership competencies common to all senior executives including change leadership, strategic orientation, customer focus, people development and more.



Why: Current and aspiring CIOs need a balanced complement of leadership skills that extend beyond expertise in running the IT function. CIOs can call on the various competencies in their leadership portfolio depending on the current needs and priorities of the business. CEOs have the most well-rounded competency portfolio, according to Egon Zehnder research, and if CIOs want to be a full business partner and contributor, it pays to cultivate the CEO's same broad skill set.

How: Choose the statements that best exemplify your typical leadership behaviors. The tool will compute your performance rating for each competency, on a scale of one to seven, and will compare that to benchmarks for typical and world-class CIOs and C-suite executives.

get it

To download the tool, go to the connect box at council.cio.com.

DIAL iN

What the Next Generation Needs to Lead

Live CIO Teleconference

June 3, 11:00 a.m.-12:00 p.m. U.S./Eastern

Join four rising IT leaders in the Council's Pathways leadership program to discuss what they are doing to become tomorrow's CIOs.

CIO PANELISTS:

- ▶ **Bill Bowman**, Bright Horizons Family Solutions
- ▶ **Phil LeBrun**, McDonald's
- ▶ **Tonya Ruscoe**, Holiday Retirement
- ▶ **Wendy Saadi**, City of Mesa



To register go to council.cio.com.

Leading Gen Y

Purdue University CIO
Gerry McCartney advises providing constant feedback, questioning old rules and framing responsibility and mission



As CIOs, how should we connect with our youngest team members?

My generation—the Baby Boomers—really like being liked as bosses. That is important to us. But that mentality is not helping our Gen Y employees. For CIOs to lead younger people and bring them into line, everything turns to managing expectations.

A winning tactic I've found useful is to constantly state flat out that if they do these certain things, they are going to be successful. Then when they do those things, you must give them immediate feedback and, if you can, reward and salute them then and there.

Feedback isn't an annual review.

The immediacy of the

feedback is the key. What doesn't work well is having the view that you come in and work hard every day, and knowing that you've done hard work should be a sufficient reward. The younger generations need to be told that they've done well. The quiet hero is not part of their world view. Quiet is translated as passive or uncaring.

Likewise, the old model of one performance review a year is not going to get the response you want. Constant feedback will. That feedback has got to be thoughtful, and it's important to explain the "why" of things. If done well, this can even serve as formal mentoring.

There is something

to the idea that this generation has a sense of entitlement, but that can be a good thing as long as it comes with a sense of responsibility.

Why get up in the morning?

The question for us is whether the discipline of coming into the office for specific hours is a necessary artifact of the workplace or some hangover from the factory model. We were taught to come in, wear this kind of uniform, do this kind of work. Maybe that's the wrong model now, and maybe Gen Y is an agent of that change. It's something for each CIO to weigh; we must strike a balance that fits our organizations.

Discipline aside,

instilling responsibility is part of a CIO's job as the leader. Give them projects with goals, even if it's maintenance work framed as a project. At Purdue, I also reinforce that after protecting borders and saving lives, ours is the third most important job in this country—educating people. On a wet Tuesday, that's a worthy job to get up to. Every CIO should identify that driver for their own organization and communicate it to raise their employees' sense of purpose and pride in what they do.

McCartney is CIO and VP of IT at Purdue University and a Council member. E-mail topics or questions for mentors to connect@cio.com.

A portrait of Ross Perot, Jr., Chairman of Perot Systems. He is a middle-aged man with short dark hair, smiling, wearing a dark suit, white shirt, and a patterned tie. His hands are clasped in front of him.

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built our business to serve over
1,000 clients in 25 countries.

Ross Perot, Jr.
Chairman

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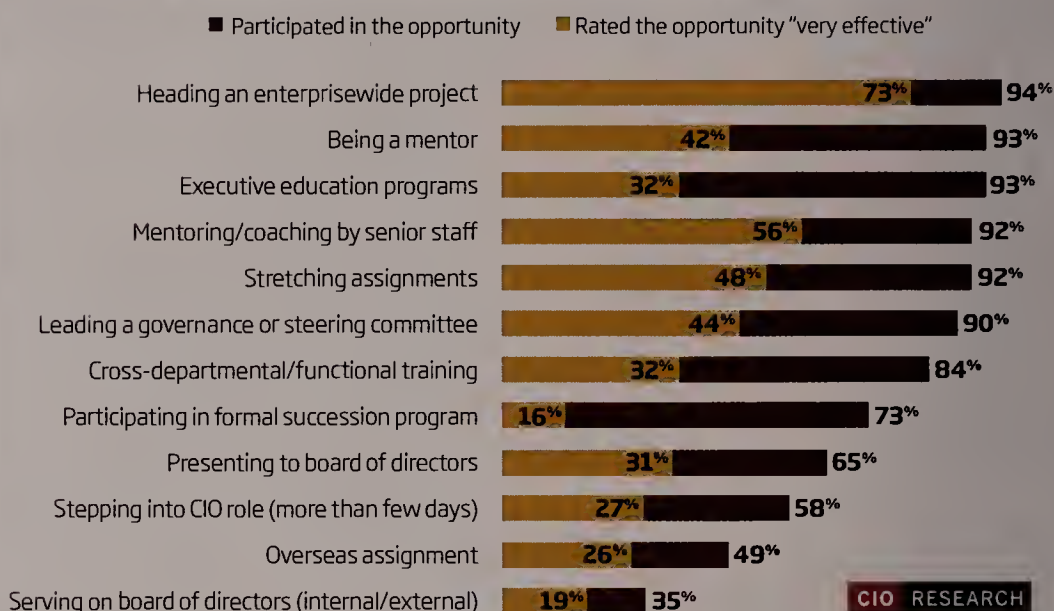
benchmarks

LEADERSHIP DEVELOPMENT

Opportunity Knocks

Leadership development opportunities are not all created equal. In fact, some popular approaches come up surprisingly short in effectiveness, according to 90 aspiring IT leaders—those on the CIO track such as the Ones to Watch nominees (Read “Forging Good Leaders in Bad Times,” Page 40) and participants in the Council’s Pathways leadership development program. They told us which opportunities they took advantage of and which ones they considered very effective in improving their business and IT leadership chops.

Effectiveness of Leadership Opportunities



On Their Minds

What are rising IT leaders asking their mentors these days? Here’s what’s come up in the group mentoring sessions of the Council’s Pathways leadership development program.

Rising in Adversity

How to use the economic crisis as an opportunity to shine as leaders and reinforce our personal brands

Achieving the Future

Destination planning—deciding where to go in our careers and how to hone in on a long-term plan and make

appropriate decisions along the way

Inspiring Creativity

How to rally staff and business partners to identify opportunities to add immediate value during these difficult times

Getting Positive

Ways to build staff

morale, elevate business relationships and develop a sense of tempered optimism about the future

Striving for Zen

Stress-relieving techniques

Role Models

Common characteristics that make some leaders “the best boss ever”



R
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R



Jorge Herranz,
Director of Business Intelligence,
Sony Pictures Home Entertainment

Herranz, two levels down from Sony Pictures CIO Rick Hopfer, is pursuing development as a well-rounded business/IT leader. He is:

- » Finding opportunity to stand out by helping Sony Pictures achieve more with less;
- » Coleading efforts to better leverage BI studiowide;
- » Assigning direct reports to streamline the Home Entertainment division’s processes;
- » Rereading *Good to Great*, with focus on the disciplined culture of delivery and execution.

Turn Geeks into Leaders Experience a live Pathways leadership development seminar: Larry Bonfante, CIO of the U.S. Tennis Association, will discuss the skills and approaches that your rising IT leaders must learn to be effective in an executive capacity. June 17, 11:30 AM U.S./ET. Register at the **Connect** box at council.cio.com.

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May 19, 2009, 9:30 a.m. to 6:30 p.m. EDT

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FEATURED SESSION:
REBECCA JACOBY,
SVP and CIO, CISCO

Topics Include:

Welcome Video Message by John Chambers,
Chairman and CEO, Cisco

INNOVATION AS A GROWTH STRATEGY

SPEAKERS: Rebecca Jacoby, SVP and CIO,
Cisco; Bob Melk, Publisher, *CIO*

THE COLLABORATION STIMULUS PLAN

SPEAKERS: Alan Cohen, VP, Enterprise Solutions,
Cisco; Marcus Bost, CIO, Adena Health Systems;
Bob Melk, Publisher, *CIO*

SOLVING THE IT FUNDING CHALLENGE

SPEAKERS: Frank Calderoni, EVP and CFO, Cisco;
Randy Lhowe, CIO, Commercial Vehicle Group;
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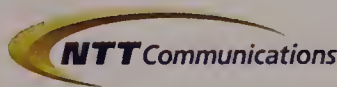


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At Home at the Races

Churchill Downs, which runs the May 2nd Kentucky Derby, is spending millions this year on video, says EVP of technology initiatives Vernon Niven.

"We believe online entertainment is the future of the [horse racing] business," says Niven, who currently is deploying products such as Adobe Media and Windows Media to be able to provide new, high-definition-quality video to viewers. "We are using technology to expand the Derby to your home."

First launched in 2006, Twinspires.com uses

a combination of live video streams and Churchill Downs's homegrown interactive wagering application to accommodate millions of fans across the country. Horse-racing enthusiasts have a landing page for all their betting needs: statistics, handicaps, horse information and live video of all 50,000 U.S. horse races each year. Users with a Web-enabled device such as a laptop, PC or PlayStation 3 to can even display the races on their own TVs—up to five tracks at a time.

—Jarina D'Auria



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